Toronto University Library

Presented by

The Clinical Society

through the Committee formed in
The Old Country
to aid in replacing the loss caused by
The disastrous Fire of February the 14th 1890

Digitized by the Internet Archive
in 2009 with funding from
University of Toronto

http://www.archive.org/details/transactions13clin

TRANSACTIONS

OF

THE CLINICAL SOCIETY.

VOL. XIII.

LONDON: PRINTED BY
SPOTTISWOODE AND CO., NEW-STREET SQUARE
AND PARLIAMENT STREET

TRANSACTIONS

OF

THE CLINICAL SOCIETY

OF

LONDON.

VOLUME THE THIRTEENTH.

LONDON:
LONGMANS, GREEN, AND CO.
1880.

R
35
C54
v.13

8435

NOTICE.

The present Volume comprises the Proceedings of the Society during its Thirteenth Session, October 1879 to May 1880.

The Council think it proper to state that the authors of the several communications are alone responsible for the statements, reasonings, and opinions contained in their respective papers.

53 Berners Street, Oxford Street:
October 1880.

CONTENTS.

PAGE

NOTICE FROM THE COUNCIL v

LIST OF ILLUSTRATIONS xiii

LIST OF OFFICERS AND MEMBERS OF THE COUNCIL DURING 1880 xv

LIST OF PRESIDENTS OF THE SOCIETY FROM ITS FORMATION . . xvi

LIST OF HONORARY MEMBERS OF THE SOCIETY xvii

LIST OF MEMBERS OF THE SOCIETY xviii

REPORT OF THE COUNCIL xxxviii

BALANCE SHEET xl

ADDRESS BY THE PRESIDENT xli

COMMUNICATIONS:—

I. REPORT ON A CASE OF LEPROSY WITH ENLARGED GLANDS 1

II. ON A CASE OF MYXŒDEMA, OR UNIVERSAL MUCOID DEGENERATION OF THE CONNECTIVE TISSUE OF THE BODY. By DYCE DUCKWORTH, M.D. . . 12

III. CASES OF MYXŒDEMA. By WILLIAM M. ORD, M.D. 15

IV. CASE OF EMPYEMA IN WHICH PORTIONS OF RIBS WERE EXCISED. By FREDERICK TAYLOR, M.D., and H. G. HOWSE, M.S. 19

V. TWO CASES OF ACUTE RHEUMATISM. By R. SOUTHEY, M.D. 25

PAGE

VI. The Case of James Orman, Struck by Lightning on June 8, 1878. By George Wilks, M.B. (of Ashford). Communicated by Sir James Paget, Bart. 32

VII. A Case of Cancer of the Breast, following long-standing Eczema of the Nipple. By George Lawson 37

VIII. A Case of Congenital Sebaceous Disease of the Head and Neck. By H. Radcliffe Crocker, M.D. 40

IX. A Case of Acute Ophthalmitis affecting both Eyes. Treatment by rapid Mercurialization and the Instillation of Duboisin. By W. Spencer Watson 43

X. A Case of Perforating Wound of the Lung. By Surgeon-Major Alcock, Army Medical Service. Communicated by C. Theodore Williams, M.D. 47

XI. Removal of the Frontal Portion of the Frontal Bone, the Roofs of both Orbits, the Ethmoid Bone, parts of both Superior Maxillæ, the Vomer, and Palate, the left greater wing of the Sphenoid Bone, and the left Eyeball: followed by complete restoration to health. By A. T. Norton 48

XII. A Case of Unusual Development of Keloid in Smallpox Scars. By James F. Goodhart, M.D. 51

XIII. Report of the Committee nominated by the President of the Clinical Society 'to Report on Dr. Goodhart's Case of Keloid Growth following Smallpox; also to inquire into the differences that are supposed to exist between the various forms of Keloid, with Special Reference to the Keloid said to be peculiar to Syphilis' . . 54

XIV. A Calotte after Use in the Treatment of Ringworm. Exhibited by Balmanno Squire, M.B. . 63

PAGE

XV. Case of Traumatic Aneurism of the Scalp. By W. J. Tyson, M B. 64

XVI. Excision of both Hip-Joints for Symmetrical Disease—Femoral Necrosis. Antiseptic Operations. Successful Result. By J. Croft . . . 66

XVII. Analysis of Forty-five Cases of Excision of the Hip-Joint. By John Croft 71

XVIII. General Table of Cases, Ditto 80

XIX. On a New Method of Excising the Hip-Joint, together with some General Remarks on the Pathology and Treatment of Hip Disease. By Robert William Parker 104

XX. Case of Excision of the Hip-Joint in an Adult two years after the Operation. By H. A. Lediard, M.D. 113

XXI. A Case of Morphœa with Raised Patches arranged in the course of Nerves. By H. Radcliffe Crocker, M.D. 116

XXII. Report of the Committee on Chloral . . . 117

XXIII. A Case of Acute Rheumatism treated by Salicylic Acid, and terminating fatally. By James F. Goodhart, M.D. 123

XXIV. A Case characterized by Symptoms of Acute Rheumatism, which terminated fatally on the tenth day. By Thomas Buzzard, M.D. . . . 127

XXV. A Case of Genu Valgum. With some Remarks on Subcutaneous Osteotomy. By B. E. Brodhurst. 129

XXVI. Case of Subastragaloid Dislocation. By T. Pickering Pick 132

XXVII. A Case of Gunshot Wound. By E. Adam. Communicated by A. Hewan, M.D. 137

XXVIII. A Case of Pyelitis. Discharge of Pus. Incision in the Loins. Recovery. By S. O. Habershon, M.D., and N. Davies-Colley, M.C. . . . 138

PAGE

XXIX. A Case of Chylous Urine after Ague in India. Albuminuria. Cessation of Chylous Urine, with the development of Glycosuria and Polyuria. By S. O. Habershon, M.D. 142

XXX. A Case of Traumatic Salivary Fistula. Treated by passing a fine catgut bougie from the mouth along Stenson's Duct. Recovery. By Henry Morris 144

XXXI. A Case of Sutural Union of the Median Nerve in the lower part of the Forearm five Weeks after its Division by a broken glass bottle, followed by Return of Function. By J. W. Hulke . . 147

XXXII. A Case of Exfoliation and Suppuration of the nails, of uncertain origin. By Alfred Sangster, M.B. 149

XXXIII. Two Cases of Popliteal Aneurism, cured by the application of Esmarch's Bandage. By Christopher Heath 151

XXXIV. A Case of Myeloid Disease of the Radius, in which the greater part of the Radius and several inches of the lower end of the Ulna were excised four years ago, leaving a very useful hand. By Henry Morris 155

XXXV. A Case of Paraplegia from Pott's Disease. Treatment by Sayre's jacket. Intestinal obstruction; death from a kink in the Duodenum. By Thomas Buzzard, M.D. 157

XXXVI. A Case of Molluscum Fibrosum, with some Remarks on its Histology. By Alfred Sangster, M.B. . 166

XXXVII. A Case of Anæsthetic Leprosy. By H. Radcliffe Crocker, M.D. 172

XXXVIII. A Case of Impacted Fishbone in the Œsophagus, penetrating the Diaphragm and Pericardium, and wounding the Heart. By Frederic S. Eve. Communicated by Howard Marsh 174

PAGE

XXXIX. Case of Typhoid Fever, associated with Acute Nephritis and Profuse Hæmaturia, without Dropsy. By Edward Headlam Greenhow, M.D. 177

XL. A Case of rapid and almost universal Paralysis involving the four extremities, both sides of face, respiration, deglutition. Syphilitic History. Recovery. By Thomas Buzzard, M.D. . 180

XLI. Case of Fracture extending through the Temporal Bone in a child aged thirteen months. By Frederick S. Eve. Communicated by Howard Marsh 191

XLII. A Case of Femoral Aneurism, treated by Ligature of the External Iliac Artery. Recovery. By H. H. Clutton 193

XLIII. A Case of Spontaneous Gangrene of the Thumb and Fingers of the Right Hand. By Thomas Smith 196

XLIV. Two Cases of Congenital Cystic Hygroma. By Thomas Smith 197

XLV. A Case of Intrathoracic Sarcoma. By F. De Havilland Hall, M.D. 200

XLVI. Three Cases of Sympathetic Ophthalmitis setting in three weeks after Excision of the other Eye, with Abstracts of Cases already published. By Edward Nettleship 206

XLVII. Some Cases of 'Bone-setting,' with Remarks. By Howard Marsh 219

XLVIII. A Case of Acute Rheumatism with Ulcerative Endocarditis. Multiple Embolisms. Death on tenth day. By R. Southey, M.D. . . . 227

XLIX. A Case of Amputation through the Hip-Joint, with Remarks. By William Stokes, M.D. (Dublin). 233

L. A Case of Secondary Hæmorrhage from a Thigh Stump, with Calcareous Degeneration of the Vessels. By W. Harrison Cripps . . . 237

PAGE

LI. On Section of the Femur above the Small Trochanter for Angular Ankylosis of the Hip. By Richard Barwell 241

LII. Cases of Rheumatic Fever Treated with Salicin. By Edward Headlam Greenhow, M.D. . . 244

LIII. Cases of Rheumatic Fever treated with Salicylate of Soda. By Edward Headlam Greenhow, M.D. 262

LIV. A Case of Acute Hysterical Vomiting of ten months' duration, caused by Displacement of the Uterus. By Graily Hewitt, M.D. . . . 346

LV. A Case of acquired Hypertrophy of one Limb. By H. H. Clutton 350

LVI. Two Cases of Disease of the Mastoid Bone, in one of which a severe attack of Herpes of the Face followed Thrombosis of the Lateral Sinus and Jugular Vein. By Henry Morris . . . 352

LVII. A Case of Unilateral Morphœa with Exostoses and Corneal Opacity. Communicated by Mr. J. F. Streatfeild 362

LVIII. An Unusual Case of Cardio-Pulmonary Bruit. By Frederick Taylor, M.D. 365

LIX. Cancer of the Pylorus—Ulceration of the Cancerous growth, and formation of an Abscess between the Pylorus and Liver. Gangrene of the left Foot and Leg. By T. Whipham, M.B. . . 369

LX. Sequel of a Case of Intestinal Obstruction, for which Gastro-Enterotomy was performed. By George Lawson 375

LIST OF ILLUSTRATIONS.

PLATES.

PAGE

I. Figs. 1 and 2, illustrating Changes in the Tissues in a Case of True Leprosy. K. Douglas Powell, M.D. 10

II. Figs. 1 and 2, Cases of Myxœdema. Fig. 3, Section of Liver in a Case of Myxœdema. W. M. Ord, M.D. 18

III. Chromolithograph: Congenital Sebaceous Disease of the Scalp. H. Radcliffe Crocker, M.D. . . 42

IV. Chromolithograph: Development of Keloid in Small-pox Scars. James F. Goodhart, M.D. . . . 54

V. Chromolithograph: Exfoliation and Suppuration of the Nails. A. Sangster, M.B. 150

VI. Fig. 1, Arm of a patient after Removal of Bones from the Forearm. H. Morris. Fig. 2, Portions of Ribs removed in a Case of Empyema F. Taylor, M.D., and H. G. Howse, M S. Fig. 3, Acquired Hypertrophy of the Right Lower Limb. H. H. Clutton . 156

VII. Fig. 1, Patient affected with Molluscum Fibrosum. Fig. 2, Vertical Section through one of the Tumours (Magnified). A. Sangster, M.B. . . 170

VIII. Chromolithograph: Molluscum Fibrosum affecting (Fig. 1) the Chest; (Fig. 2) the Sole of the Foot. A. Sangster, M.B. 170

IX. Charts of Temperature: (1) Case of Intrathoracic Sarcoma. F. De Havilland Hall, M.D. (2) Case of Typhoid Fever. E. Headlam Greenhow, M.D. (3) Case of Pyloric Cancer. T. Whipham, M.B. . 178

PAGE

X. Chromolithograph: Congenital Cystic Hygroma. Thomas Smith 198

XI. Chromolithograph: Congenital Cystic Hygroma. Thomas Smith 198

XII. Figs. 1 and 2, Illustrating Sequel of a Case of Intestinal Obstruction in which Gastro-enterotomy was performed. G. Lawson 376

WOODCUTS.

Case of James Orman, Struck by Lightning; appearance of his Clothes. G. Wilks, M.B. 33

Chart of Temperature in the Case 36

Case of Genu Valgum; Subcutaneous Osteotomy, Figs. 1 and 2. B. E. Brodhurst 130

Intra-thoracic Sarcoma; diagram. F. De Havilland Hall, M.D. 201

CLINICAL SOCIETY OF LONDON.

OFFICERS AND COUNCIL

ELECTED AT

THE GENERAL MEETING, JANUARY 9, 1880.

PRESIDENT.

EDWARD HEADLAM GREENHOW, M.D., F.R.S.

VICE-PRESIDENTS.

JOHN S. BRISTOWE, M.D.
THOMAS BUZZARD, M.D.
ANDREW CLARK, M.D.
ROBERT BRUDENELL CARTER.
JOHN WHITAKER HULKE, F.R.S.
THOMAS SMITH.

TREASURER.

CHRISTOPHER HEATH.

COUNCIL.

JULIUS ALTHAUS, M.D.
THOMAS BARLOW, M.D.
WILLIAM CAYLEY, M.D.
ROBERT FARQUHARSON, M.D.
JAMES FREDERICK GOODHART, M.D.
JAMES EDWARD POLLOCK, M.D.
GEORGE VIVIAN POORE, M.D.
EDMUND SYMES THOMPSON, M.D.
THOMAS TILLYER WHIPHAM, M.D.
ALFRED WILTSHIRE, M.D.
MARCUS BECK, M.S.
EDWARD BELLAMY.
WILLIAM BARTLETT DALBY.
JAMES GREY GLOVER, M.D.
JOHN LANGTON.
CHARLES MACNAMARA.
THOMAS PICKERING PICK.
LEONARD WILLIAM SEDGWICK, M.D.
WILLIAM F. TEEVAN.
WILLIAM SPENCER WATSON.

HONORARY SECRETARIES.

FREDERICK TAYLOR, M.D.
F. HOWARD MARSH.

TRUSTEES.

E. HEADLAM GREENHOW, M.D., F.R.S.
J. BURDON SANDERSON, M.D., F.R.S.
CHRISTOPHER HEATH.

PRESIDENTS OF THE SOCIETY,

(*From its Formation*).

ELECTED

1867 Sir THOMAS WATSON, Bart., M.D., D.C.L., LL.D., F.R.S.

1869 Sir JAMES PAGET, Bart., D.C.L., LL.D., F.R.S.

1871 Sir WILLIAM WITHEY GULL, Bart., M.D., D.C.L., F.R.S.

1873 PRESCOTT GARDNER HEWETT, F.R.S.

1875 Sir WILLIAM JENNER, Bart., M.D., K.C.B., D.C.L., F.R.S.

1877 GEORGE WILLIAM CALLENDER, F.R.S.

1879 EDWARD HEADLAM GREENHOW, M.D., F.R.S.

HONORARY MEMBERS.

1874 Christison, Sir Robert, Bart., M.D., D.C.L., LL.D., Physician in Ordinary to H.M. the Queen in Scotland: 40 Moray Place, Edinburgh.

1876 Hawkins, Cæsar Henry, F.R.S., Sergeant Surgeon to H.M. the Queen, and Consulting Surgeon to St. George's Hospital: 26 Grosvenor Street, W.

1874 Pirrie, William, M.D., L.R.C.S. Ed., Professor of Surgery at the University of Aberdeen: 253 Union Street, Aberdeen.

1876 Watson, Sir Thomas, Bart., M.D., D.C.L., LL.D., F.R.S., Physician in Ordinary to H.M. the Queen; Consulting Physician to King's College Hospital: 16 Henrietta Street, Cavendish Square, W. (Pres. 1867–8.)

1876 Williams, Charles James Blasius, M.D., F.R.S., Physician Extraordinary to H.M. the Queen; Consulting Physician to the Hospital for Consumption and Diseases of the Chest: 47 Upper Brook Street.

FOREIGN HONORARY MEMBERS.

1874 Billroth, Theodor, M.D., Professor of Surgery in the University of Vienna.

1874 Charcot, J. M., M.D., Physician to the Hôpital de la Salpêtrière.

1874 Flint, Austin, M.D., Senr., Professor of Medicine in the Bellevue Hospital, Medical College, New York.

1874 Frerichs, Fried. Theod., M.D., Professor of Clinical Medicine in the University of Berlin.

1874 Gross, Samuel D., M.D., F.C.P. Philad., D.C.L. Oxon., Professor of Surgery in the Jefferson Medical College of Philadelphia.

1874 Langenbeck, Bernhard von, M.D., Professor of Surgery in the University of Berlin.

1874 Ricord, Philippe, M.D., Ex-Surgeon in Chief of the Hôpital du Midi, and late President of the Academy of Medicine, Paris.

1874 Ziemssen, H. von, M.D. Professor of Clinical Medicine at Erlangen.

*** *Members are requested to inform the Secretaries of any Corrections when necessary.*

LIST OF MEMBERS.

(P.) *President.* (T.) *Treasurer.*
(V.P.) *Vice-President.* (S.) *Secretary.*
(C.) *Member of Council.*

Members who have compounded for their Subscriptions are marked thus (*).

Non-Resident Members who have paid the Composition Fee for the Transactions are marked thus (†).

Elected	
1879	Abercrombie, John, M.D.: Hospital for Sick Children, 49 Great Ormond Street, W.C.
Orig Memb	Acland, Henry Wentworth, M.D., F.R.S., LL.D., Honorary Physician to H.R.H. the Prince of Wales; and Regius Professor of Medicine in the University of Oxford. (V.P. 1868–70.)
1879	Adams, James Edward, 17 Finsbury Circus, E.C.
1879	Adams, William: Tower Lodge, Regent's Park, Gloucester Gate, N.W.
1870	†Allbutt, Thomas Clifford, M.D., F.L.S., Lecturer on the Practice of Physic at the Leeds School of Medicine, and Physician to the Leeds General Infirmary: 38 Park Square, Leeds.
1871	Althaus, Julius, M.D. (C.): 36 Bryanston Street, Portman Square, W. (C. 1879–80.)
1868	Anderson, John Ford, M.D.: 28 Buckland Crescent, Belsize Park, N.W.
Orig Memb	Andrew, James, M.D., Physician to, and Lecturer on Medicine at, St. Bartholomew's Hospital: 22 Harley Street, Cavendish Square, W. (C. 1872–4.)
Orig Memb	Arnott, Henry: Braeside, Beckenham. (C. 1872–5.)

Elected

Orig Memb Baker, W. Morrant, Assistant Surgeon to, and Lecturer on Physiology and General Anatomy at, St. Bartholomew's Hospital; Surgeon to the Evelina Hospital for Sick Children: 26 Wimpole Street, Cavendish Square, W. (C. 1873.)

1880 Ball, Professor B., M.D., Professor to the Faculty of Medicine of Paris, 3 Faubourg St. Honoré, Paris.

1878 Ball, James Barry, M.D.: 195 Loughborough Road, Brixton, S.W.

1868 Bantock, George Granville, M.D.: 12 Granville Place, Portman Square, W.

Orig Memb Barclay, Andrew Whyte, M.D., Physician to, and Lecturer on Medicine at, St. George's Hospital; Medical Officer of Health for Chelsea: 23a Bruton Street, Berkeley Square, W. (C. 1870–1.)

1876 Barker, Arthur E. J., Assistant Surgeon to University College Hospital: 87 Harley Street, Cavendish Square, W.

1869 Barker, Edgar: 21 Hyde Park Street, W. (C. 1875.)

1875 Barlow, Thomas, M.D. (C.), Assistant Physician to University College Hospital, and to the Hospital for Sick Children, Great Ormond Street: 10 Montague Street, Russell Square, W.C. (C. 1880.)

Orig Memb Barwell, Richard, Surgeon to, and Lecturer on Surgery at, the Charing Cross Hospital: 32 George Street, Hanover Square, W. (C. 1872–5, V.P. 1877–79.)

Orig Memb Bastian, Henry Charlton, M.D., F.R.S., Physician to University College Hospital, and Assistant Physician to the National Hospital for the Paralysed and Epileptic, and Professor of Pathological Anatomy at University College: 20 Queen Anne Street, W. (C. 1876–8.)

1868 Baümler, Christian G. H., M.D., Professor of Materia Medica at the University of Erlangen.

1875 Beck, Marcus, M.S. (C), Assistant Surgeon to University College Hospital: 30 Wimpole Street, Cavendish Square, W. (C. 1880.)

1875 Bellamy, Edward (C.), Surgeon to Charing Cross Hospital; Professor of Anatomy in the Science and Art Department, South Kensington: 17 Wimpole Street, Cavendish Square, W. (C. 1879–80.)

1871 Bennett, James Risdon, M.D., F.R.S., Consulting Physician to St. Thomas's Hospital, and to the City of London Hospital for Diseases of the Chest: 22 Cavendish Square, W.

Elected	
1878	Bennett, William Charles Storer, Dental Surgeon to the St. Marylebone General Dispensary, Welbeck Street; Medical Tutor to the Dental Hospital of London: 17 George Street, Hanover Square, W.
1874	Bennett, William Henry, Assistant Surgeon to St. George's Hospital, Surgeon to the Belgrave Hospital for Children: 5 Savile Row, Burlington Gardens, W.
1879	Bindon, William John Vereker, M.D.: 2 Elm Villas, Kilburn.
1868	Brace, William H., M.D.: 7 Queen's Gate Terrace, Kensington, W. (C. 1876–7.)
1878	Bridges, Robert, M.B., M.A. Oxford, Assistant Physician to the Hospital for Sick Children, and Physician to the Great Northern Hospital: 52 Bedford Square, W.C.
1868	Bright, George Charles, M.B.: 29 Lüttichen Strasse, Dresden.
1868	Bright, John Meaburn, M.D.: Forest Hill, S.E.
Orig Memb	Bristowe, John S., M.D. (V.P.), Physician to, and Lecturer on Medicine at, St. Thomas's Hospital; Medical Officer of Health for Camberwell: 11 Old Burlington Street, W. (C. 1869–70, V.P. 1879–80.)
Orig Memb	Broadbent, William Henry, M.D., Physician to, and Lecturer on Medicine at, St. Mary's Hospital; Physician to the London Fever Hospital: 34 Seymour Street, Portman Square, W. (C. 1871–3.)
Orig Memb	Brodhurst, Bernard Edward, Surgeon to the Royal Orthopædic Hospital: 20 Grosvenor Street, W.
1875	Brown, Charles Robert, M.D.: Hastings, Sussex.
1874	Brown, George: 12 Colebrooke Row, Islington, N.
1876	Browne, George Buckston: 80 Wimpole Street, Cavendish Square, W.
Orig Memb	Bryant, Thomas, Surgeon to, and Lecturer on Surgery at, Guy's Hospital: 53 Upper Brook Street, Grosvenor Square, W. (C. 1872, V.P. 1876–7.)
Orig Memb	Buchanan, George, M.D., Medical Officer of the Local Government Board: 24 Nottingham Place, W. (C. 1877.)
1868	†Burton, John M.: Lee Park, Blackheath, S.E.
1879	Burton, William Edward: 24 Wimpole Street, Cavendish Square, W.
1871	Butt, William F.: 25 Park Street, Park Lane, W.
Orig Memb	Buzzard, Thomas, M.D. (V.P.), Physician to the National Hospital for the Paralysed and Epileptic: 65 Grosvenor Street, W. (S. 1870–2, C. 1873–6, V.P. 1880.)

Elected	
1880	Carrington, Robert Edmund, M.D.: 4 St. Thomas's Street, Southwark, S.E.
1869	Carter, Robert Brudenell (V.P.), Ophthalmic Surgeon to, and Lecturer on Ophthalmology at, St. George's Hospital; Surgeon to the Royal South London Ophthalmic Hospital: 69 Wimpole Street, W. (C. 1873–6, V.P. 1879–80.)
1868	Cavafy, John, M.D., Senior Assistant Physician to St. George's Hospital; 2 Upper Berkeley Street, Portman Square, W.
Orig Memb	Cayley, William, M.D. (C.), Physician to, and Lecturer on the Principles and Practice of Medicine at, the Middlesex Hospital: 58 Welbeck Street, W. (C. 1874–5, S. 1876–8, C. 1879–80.)
1873	Chisholm, Edwin, M.D.: Abergeldie, Ashfield, near Sydney, New South Wales.
1868	Cholmeley, William, M.D., Physician to the Great Northern Hospital, and Margaret Street Infirmary for Consumption: 63 Grosvenor Street, W. (C. 1871–3.)
Orig Memb	Church, William Selby, M.D., Physician to, and Lecturer on Clinical Medicine at, St. Bartholomew's Hospital: 130 Harley Street, Cavendish Square, W. (C. 1874–6.)
1873	Churton, Thomas: 7 Park Square, Leeds.
Orig Memb	Clapton, Edward, M.D.: 10A St. Thomas's Street, Southwark, S.E. (C. 1872–4.)
Orig Memb	Clark, Andrew, M.D. (V.P.), Physician to, and Lecturer on Medicine at, the London Hospital: 16 Cavendish Square, W. (C. 1876–8, V.P. 1880.)
1874	Clark, Andrew, Assistant Surgeon to, and Lecturer on Practical Surgery at, the Middlesex Hospital: 19 Cavendish Place, Cavendish Square, W.
1877	†Clay, Robert Hogarth, M.D.: 4 Windsor Villas, Plymouth.
1868	Clover, Joseph Thomas: 3 Cavendish Place, Cavendish Square, W. (C. 1873.)
1877	Clutton, Henry Hugh, M.A., Assistant Surgeon to St. Thomas's Hospital: 16 Palace Road, Albert Embankment, S.E.
1878	Collie, Alexander, M.D.: Fever Hospital (Metropolitan Asylum District), The Grove, Homerton, E.
1878	Collins, W. M., M.D., M.C., Queen's Univ. I., Scots Guards: 78 Grosvenor Street, W.

Elected	
1872	Cooke, Thomas, Assistant Surgeon to the Westminster Hospital: 16 Woburn Place, Russell Square, W.C.
1868	Cooper, Frank W.: Leytonstone, Essex.
1880	Cottle, Wyndham, M.B.: 3 Savile Row, W.
Orig Memb	Couper, John, Surgeon to the London Hospital and Assistant Surgeon to the Royal London Ophthalmic Hospital: 80 Grosvenor Street, W. (C. 1874.)
1875	Coupland, Sidney, M.D., Physician to, and Lecturer on Pathological Anatomy at, the Middlesex Hospital: 14 Weymouth Street, Portland Place, W.
1879	Cripps, William Harrison, Surgical Registrar to St. Bartholomew's Hospital; Surgeon to the Great Northern Hospital: 6 Stratford Place, Oxford Street, W.
1872	Critchett, Anderson, Ophthalmic Surgeon to the Royal Free Hospital: 21 Harley Street, W.
1877	Crocker, Henry Radcliffe, M.D., Physician to the Skin Department, University College Hospital; Assistant Physician and Pathologist to the East London Hospital for Children: 28 Welbeck Street, Cavendish Square, W.
Orig Memb	Croft, John, Surgeon to St. Thomas's Hospital: 61 Brook Street, Grosvenor Square, W. (C. 1870–2.)
1868	Crucknell, Henry H., M.B.: [58 Welbeck Street.]
1872	Dalby, William Bartlett, M.B. (C.), Aural Surgeon to St. George's Hospital: 18 Savile Row, W. (C. 1879–80.)
Orig Memb	Davies, Herbert, M.D., Senior Physician to, and Lecturer on Medicine at, the London Hospital: 23 Finsbury Square, E.C. (V.P. 1877.)
1879	Davies-Colley, J. Neville C., M.B., M.C., Assistant Surgeon to Guy's Hospital: 36 Harley Street, Cavendish Square, W.
Orig Memb	Davis, John Hall, M.D., Obstetric Physician to, and Lecturer on Midwifery and Diseases of Women and Children at, the Middlesex Hospital: 24 Harley Street, W. (C. 1870.)
1879	Davy, Henry, M.B.: 34 Southernhay, Exeter.
1868	Day, William Henry, M.D., Physician to the Samaritan Free Hospital for Women and Children: 10 Manchester Square, W.
1872	De Castro, James Cato, M.B.: Pau, France.
1879	Dennis, Frederick S., M.D.: 25 East 21st Street, New York, U.S.

ELECTED

1875 DENT, CLINTON T., Assistant Surgeon to St. George's Hospital: 29 Chesham Street, Belgrave Square, S.W.

Orig Memb DICKINSON, WILLIAM HOWSHIP, M.D., Physician to, and Lecturer on Medicine at, St. George's Hospital; Physician to the Hospital for Sick Children: 9 Chesterfield Street, Mayfair, W. (C. 1874–5.)

1871 DIVER, EBENEZER, M.D.: Caterham Valley.

1873 DONKIN, ARTHUR SCOTT, M.D.

Orig Memb DOWN, JOHN LANGDON H., M.D., Physician to, and Lecturer on Medicine at, the London Hospital: 39 Welbeck Street, W. (C. 1870–2.)

1874 DOWSE, THOMAS STRETCH, M.D.: 14 Welbeck Street, Cavendish Square, W.

1868 DRAGE, CHARLES, M.D.: Hatfield, Herts.

1879 DREWITT, F. G. DAWTREY, M.B.: Hospital for Sick Children, 49 Great Ormond Street.

Orig Memb DUCKWORTH, DYCE, M.D., Assistant Physician to St. Bartholomew's Hospital: 11 Grafton Street, Bond Street, W. (C. 1875–7.)

Orig Memb DUFFIN, ALFRED B., M.D., Physician to King's College Hospital, Professor of Pathological Anatomy in King's College, London: 18 Devonshire Street, Portland Place, W. (C. 1872–4.)

1869 DUKE, OLLIVER THOMAS, M.B., Surgeon, Bengal Army, India.

Orig Memb DURHAM, ARTHUR EDWARD, Surgeon to, and Lecturer on Surgery at, Guy's Hospital: 82 Brook Street, W. (C. 1867-9.)

Orig Memb EDIS, ARTHUR W., M.D., Assistant Obstetric Physician to the Middlesex Hospital: 22 Wimpole Street, Cavendish Square, W.

Orig Memb ERICHSEN, JOHN E., F.R.S., Holme Professor of Clinical Surgery in University College, and Senior Surgeon to University College Hospital: 6 Cavendish Place, Cavendish Square, W. (V.P. 1869–71.)

1876 EVANS, GEORGE HENRY, M.D.

1868 EVANS, JULIAN, M.B., Assistant Physician, Victoria Hospital for Sick Children: 123 Finborough Road, Redclyffe Square, S.W.

1877 EWART, WILLIAM, M.B., Lecturer on Physiological Chemistry at St. George's Hospital: 33 Curzon Street, Mayfair, W.

ELECTED

Orig Memb FAGGE, CHARLES HILTON, M.D., Senior Assistant Physician to, and Lecturer on Pathology at, Guy's Hospital: 11 St. Thomas's Street, Southwark, S.E. (C. 1875–7.)

1868 FAIRBANK, FREDERICK ROYSTON, M.D.: 46 Hall Gate, Doncaster.

1868 FALCONER, RANDLE WILBRAHAM, M.D., Physician to the Royal United and Mineral Water Hospitals, Bath.

1872 FARQUHARSON, ROBERT, M.D., M.P. (C.): 23 Brook Street, Grosvenor Square, W. (C. 1879–80.)

1872 FENWICK, J. C. J., M.B.: 16 Old Elvet, Durham.

1878 FIELD, GEORGE P., Aural Surgeon to St. Mary's Hospital: 31 Lower Seymour Street, Portman Square, W.

1876 FINLAY, DAVID WHITE, M.D., Assistant Physician to the Middlesex Hospital: 21 Montagu Street, Portman Square, W.

1868 FISH, JOHN CROCKETT, M.D.: 92 Wimpole Street, Cavendish Square, W. (C. 1869-70.)

1872 FISHER, FREDERIC R., Assistant Surgeon to the Victoria Hospital for Sick Children: 79 Grosvenor Street, W.

1879 FITZGERALD, WILLIAM A., M.B., 8 Palace Road, S.E.

1878 *FONMARTIN, HENRY DE, M.D. Par.

1878 FOX, THOMAS COLCOTT, M.B. Lond., B.A. Camb.: 14 Harley Street, Cavendish Square, W.

Orig Memb FOX, WILSON, M.D., F.R.S., Physician Extraordinary to H.M. the Queen; Holme Professor of Clinical Medicine in University College, and Physician to University College Hospital: 67 Grosvenor Street, W. (C. 1873. V.P. 1878–9.)

1868 GANT, FREDERICK JAMES, Surgeon to the Royal Free Hospital: 16 Connaught Square, W. (C. 1877–9.)

1879 GARSTANG, THOMAS WALTER HARROPP, Oakleigh, Dobcross, near Manchester.

1868 GLOVER, JAMES GREY, M.D. (C.), Hon. Surgeon to the Holloway and North Islington Dispensary: 33 Compton Terrace, Islington, N. (C. 1878–80.)

1875 GODLEE, RICKMAN JOHN, M.S., M.B., Assistant Surgeon to University College Hospital: 22 Henrietta Street, Cavendish Square, W.

1878 GOLDING-BIRD, C. H., M.B., Assistant Surgeon to Guy's Hospital: 13 St. Thomas's Street, Southwark, S.E.

1875 GOODHART, JAMES FREDERICK, M.D. (C.), Assistant Physician to Guy's Hospital: 27 Weymouth Street, Portland Place, W. (C. 1880.)

Elected

1869 Goodridge, Henry Frederick Augustus, M.D., Physician to the Bath Royal United Hospital: Bath.

1877 Gould, A. Pearce, M.S., Assistant Surgeon to, and Lecturer on Anatomy at, the Westminster Hospital: 16 Queen Anne Street, Cavendish Square, W.

1871 Gover, Robert M., M.B., 12 Hereford Gardens, W.

1875 Gowers, William Richard, M.D., Assistant Physician to University College Hospital: 50 Queen Anne Street, Cavendish Square, W.

1868 Green, T. Henry, M.D., Physician to, and Lecturer on Pathology at, the Charing Cross Hospital: 74 Wimpole Street, W. (C. 1877–9.)

1875 Greenfield, William Smith, M.D., Assistant Physician to St. Thomas's Hospital: 15 Palace Road, Albert Embankment, S.E.

Orig Memb Greenhow, Edward Headlam, M.D., F.R.S. (*President*), Consulting Physician to the Middlesex Hospital: 14A Manchester Square, W. (T. 1867–78, P. 1879–80.)

1868 †Gueneau de Mussy, Henri, M.D.: 15 Rue du Cirque, Paris.

Orig Memb Gull, Sir William Withey, Bart., M.D., D.C.L., F.R.S., Physician Extraordinary to the Queen: 74 Brook Street, W. (V.P. 1868–70, P. 1871–2.)

1870 Gwynn, Edmund, M.D.: 6 Hampstead Hill Gardens, N.W.

Orig Memb Habershon, Samuel Osborne, M.D., Physician to Guy's Hospital: 70 Brook Street, W. (C. 1873, V.P. 1878–9.)

1875 Hale, C. D. B.: 8 Sussex Gardens, Hyde Park, W.

1878 Hall, F. de Havilland, M.D.: 46 Queen Anne Street, Cavendish Square, W.

1878 Hamilton, J. Lawrence, L.R.C.P. Ed.: 34 Gloucester Terrace, Hyde Park, W.

1873 Harley, George, M.D., F.R.S.: 25 Harley Street, Cavendish Square, W.

Orig Memb Harley, John, M.D., F.L.S., Physician to, and Lecturer on Clinical Medicine at, St. Thomas's Hospital: 39 Brook Street, Grosvenor Square, W. (C. 1875.)

1872 Harris, Henry, M.D.: Trengweath, Redruth, Cornwall.

Orig Memb Hart, Ernest: 38 Wimpole Street, Cavendish Square, W. (C. 1867–8.)

Elected	
1869	Haward, J. Warrington, Surgeon to St George's Hospital; Assistant Surgeon to the Hospital for Sick Children: 16 Savile Row, Burlington Gardens, W. (C. 1876–8.)
Orig Memb	Heath, Christopher (*Treasurer*), Surgeon to University College Hospital, and Holme Professor of Clinical Surgery in University College: 36 Cavendish Square, W. (C. 1867–71, V.P. 1876–8, T. 1879–80.)
1879	Henderson, George Courtenay, M.B.: University College Hospital, Gower Street.
1868	Heslop, Thomas Pretious, M.D., Physician to the Children's Hospital, Birmingham.
1868	Hewan, Archibald, M.D.: 9 Chester Square, S.W.
Orig Memb	Hewett, Prescott Gardner, F.R.S., Surgeon Extraordinary to H.M. the Queen; Consulting Surgeon to St. George's Hospital: 1 Chesterfield Street, Mayfair, W. (V.P. 1869–71, P. 1873–4.)
Orig Memb	Hewitt, Graily, M.D., Professor of Midwifery in University College, and Obstetric Physician to University College Hospital: 36 Berkeley Square, W. (C. 1878–9.)
Orig Memb	Hicks, J. Braxton, M.D., F.R.S., F.L.S., Physician Accoucheur to, and Lecturer on Midwifery and the Diseases of Women and Children at, Guy's Hospital: 24 George Street, Hanover Square, W. (C. 1875–7.)
1868	Hill, Berkeley, M.B., Professor of Clinical Surgery in University College, London, Surgeon to University College Hospital, and Surgeon to the Lock Hospital: 55 Wimpole Street, W. (C. 1870–1.)
1874	Holderness, William Brown, 15 Park Street, Windsor.
1868	†Holman, Constantine, M.D.: Reigate, Surrey.
1868	Holman, William Henry, M.B.: 68 Adelaide Road, South Hampstead, N.W.
Orig Memb	Holmes, Timothy, Surgeon to, and Lecturer on Surgery at, St. George's Hospital; Surgeon-in-Chief to the Metropolitan Police Force: 18 Great Cumberland Place, Hyde Park, W. (C. 1867–9, V.P. 1873–5.)
Orig Memb	Holt, Barnard Wight, Consulting Surgeon to, and Lecturer on Clinical Surgery at, the Westminster Hospital; Medical Officer of Health for Westminster: 14 Savile Row, W.
Orig Memb	Holthouse, Carsten. (C. 1870–2.)

Elected	
1878	Hood, Donald William Charles, M.D.: 43 Green Street, Park Lane, W.
1873	Hope, William, M.D., Senior Physician to Queen Charlotte's Lying-in Hospital: 56 Curzon Street, Mayfair, W.
1871	Houghton, Henry G., 6 Mount Street, Grosvenor Square, W.
1878	Houghton, Walter B., M.D., Assistant Physician to Charing Cross Hospital: 26 Cavendish Square, W.
1880	Hovell, T. Mark: Throat and Chest Hospital, Golden Square, W.
1876	Howse, Henry Greenway, M.S., Surgeon to, and Lecturer on Anatomy at, Guy's Hospital; Surgeon to the Evelina Hospital for Sick Children: 10 St. Thomas's Street, S.E.
Orig Memb	Hulke, John Whitaker, F.R.S. (V.P.), Surgeon to, and Lecturer on Surgery at, the Middlesex Hospital, and Surgeon to the Royal London Ophthalmic Hospital: 10 Old Burlington Street, W. (C. 1867–9, V.P. 1878–80.)
Orig Memb	Humphry, George Murray, M.D., F.R.S., Professor of Anatomy in the University of Cambridge, and Surgeon to Addenbrooke's Hospital, Cambridge. (V.P. 1867–70.)
Orig Memb	Hutchinson, Jonathan, Surgeon to, and Lecturer on Surgery at, the London Hospital; Surgeon to the Hospital for Diseases of the Skin, and Surgeon to the Royal London Ophthalmic Hospital: 15 Cavendish Square, W. (C. 1867–8, V.P. 1875–6.)
1879	Inkson, James, M.D., Surgeon-Major, Army Medical Department: 15 Prospect Row, Brompton, Chatham.
Orig Memb	Jackson, J. Hughlings, M.D., Physician to, and Lecturer on Physiology at, the London Hospital; Physician to the National Hospital for the Paralysed and Epileptic: 3 Manchester Square, W. (C. 1872–3.)
1877	Jacobson, Walter Hamilton Acland, M.B., Assistant Surgeon to Guy's Hospital: 41 Finsbury Square.
Orig Memb	Jenner, Sir William, Bart., M.D., K.C.B., D.C.L., LL.D., F.R.S., Physician in Ordinary to H.M. the Queen and to H.R.H. the Prince of Wales; Consulting Physician to University College Hospital: 63 Brook Street, W. (V.P. 1867–70, P. 1875–6.)
1875	Jessett, Frederick Bowreman: Pier Road, Erith, Kent.

ELECTED

Orig Memb JOHNSON, GEORGE, M.D., F.R.S., Physician to King's College Hospital: 11 Savile Row, W. (V.P. 1874–6.)

1878 JOHNSTON, WILLIAM, M.D., M.C.: 16 Lonsdale Terrace, Upper Kent Street, Leicester.

Orig Memb JONES, SYDNEY, M.B., Surgeon to, and Lecturer on Surgery at, St. Thomas's Hospital: 16 George Street, Hanover Square, W. (C. 1867–8.)

1872 JONES, THOMAS R., M.D., Assistant Physician, Victoria Hospital for Sick Children: 19 Chapel Street, Belgrave Square, S.W.

1876 JORDAN, FURNEAUX, Surgeon to the Queen's Hospital Birmingham: 22 Colmore Row, Birmingham.

1878 KEETLEY, CHARLES ROBERT BELL, Assistant Surgeon to the West London Hospital: 24 Manchester Street, W.

Orig Memb KELLY, CHARLES, M.D., Medical Officer of Health for the West Sussex District: Worthing, Sussex.

1868 KESTEVEN, WILLIAM B., M.D.: 401 Holloway Road, N. (C. 1870–2.)

1878 LACEY, THOMAS WARNER: 196 Burrage Road, Plumstead, S.E.

1873 LACY, C. DE LACY, 5 Ovington Square, Brompton.

1868 LANGMORE, JOHN C., M.B.: 20 Oxford Terrace, Hyde Park, W. (C. 1872–5.)

Orig Memb LANGTON, JOHN, (C.) Assistant Surgeon to, and Lecturer on Anatomy at, St. Bartholomew's Hospital, and Surgeon to the City of London Truss Society: 2 Harley Street, W. (C. 1878–80.)

1869 LAWRENCE, JAMES E.: Geraldine Lodge, East Hill, Wandsworth, S.W.

Orig Memb LAWSON, GEORGE, Surgeon to, and Joint Lecturer on Surgery at, the Middlesex Hospital, and Surgeon to the Royal London Ophthalmic Hospital: 12 Harley Street, W. (S. 1871–3, C. 1874–6.)

1877 LEDIARD, HENRY AMBROSE, M.D., Surgeon to the Cumberland Infirmary: 78 Lowther Street, Carlisle.

Orig Memb LEE, HENRY, Consulting Surgeon to St. George's Hospital: 9 Savile Row, W. (V.P. 1870–2.)

1874 LEE, ROBERT JAMES, M.D., Assistant Physician to the Hospital for Sick Children: 6 Savile Row, W.

1877 LEES, DAVID B., M.D., Assistant Physician to St. Mary's Hospital, and to the Hospital for Sick Children: 2 Thurloe Houses, Thurloe Square, S.W.

ELECTED

1879 LICHTENBERG, GEORGE, M.D.: 47 Finsbury Square.

1878 LISTER, JOSEPH, D.C.L., LL.D., F.R.S., Professor of Clinical Surgery at King's College, and Surgeon to King's College Hospital: 12 Park Crescent, Regent's Park, W.

1868 LITTLE, LOUIS STROMEYER: China.

1875 LIVEING, EDWARD, M.D.: 52 Queen Anne Street, Cavendish Square, W.

1872 LIVEING, ROBERT, M.D., Lecturer on Dermatology, and Physician to the Skin Department at the Middlesex Hospital: 11 Manchester Square, W.

1878 LLOYD, ROBERT HODGENS, M.D., Medical Superintendent, Lambeth Infirmary, S.W.

1876 LONGHURST, ARTHUR EDWIN TEMPLE, M.D.: 22 Wilton Street, Grosvenor Place, S.W.

1876 LUCAS, R. CLEMENT, M.B., B.S., Assistant Surgeon to Guy's Hospital: 18 Finsbury Square, E.C.

1879 LUNN, J. R.: St. Thomas's Hospital, Albert Embankment, S.E.

1880 LYELL, ROBERT, Assistant Surgeon to the Middlesex Hospital: 26 Harley Street, Cavendish Square.

1871 MACCORMAC, WILLIAM, Surgeon to, and Lecturer on Surgery at, St. Thomas's Hospital: 13 Harley Street, W. (C. 1877–9.)

Orig Memb MACKENZIE, MORELL, M.D., Physician to the Hospital for Diseases of the Throat: 19 Harley Street, Cavendish Square, W.

1879 MACKENZIE, STEPHEN, M.D., Assistant Physician to, and Lecturer on Medicine at, the London Hospital: 26 Finsbury Square, E.C.

1879 MACLAGAN, THOMAS JOHN, M.D.: 9 Cadogan Place, Belgrave Square, S.W.

1877 MACLEAN, THOMAS EDWIN, M.B., B.S.

1875 MACNAMARA, CHARLES (C.), Surgeon to the Westminster Hospital: 13 Grosvenor Street, W. (C. 1879–80.)

1879 MAGILL, JAMES, M.D., M.C., Surgeon, Coldstream Guards: Coldstream Guards Hospital, Vincent Square, Westminster, S.W.

1874 MAHOMED, FRED. AKBAR, M.D., Medical Registrar, Guy's Hospital: 12 St. Thomas's Street, Southwark, S.E.

Orig Memb †MARCET, WILLIAM, M.D., F.R.S.: 39 Grosvenor Street, W. (C. 1867–9.)

1868 MARSH, F. HOWARD (*Hon. Secretary*), Assistant Surgeon to St. Bartholomew's Hospital: 36 Bruton Street, Berkeley Square, W. (C. 1876–7, S. 1878–80.)

Elected	
1875	Marshall, F. J., Resident Medical Officer, St. George's Hospital, W.
1868	†May, Edward Hooper, M.D.: High Cross, Tottenham, Middlesex, N.
1868	Meadows, Alfred, M.D., Physician Accoucheur to, and Lecturer on Midwifery at, St. Mary's Hospital: 27 George Street, Hanover Square, W. (C. 1871–4.)
1876	Melladew, H. F. L., M.D., Surgeon, Royal Horse Guards: Regent's Park Barracks, N.W.
1878	Meredith, William Appleton, M.B., C.M., Assistant Surgeon to the Samaritan Free Hospital for Women and Children: 14 Old Burlington Street, W.
1873	Mickle, William Julius, M.D., Physician Superintendent, Grove Hall Asylum, Bow, E.
1877	Milner, Edward, Surgeon to the Lock Hospital: 32 New Cavendish Street, Portland Place, W.
1874	Morgan, John Hammond: 12 Chapel Street, Park Lane, W.
1877	Morris, Henry, M.B., Surgeon to, and Lecturer on Clinical Surgery at, the Middlesex Hospital: 2 Mansfield Street, Portland Place, W.
1877	Morris, Malcolm Alex., Lecturer on Skin Diseases at St. Mary's Hospital: 63 Montagu Square, W.
1879	Moullin, Charles W. Mansell, 80 Porchester Terrace, Bayswater.
Orig Memb	Moxon, Walter, M.D., F.L.S., Physician to, and Lecturer on Materia Medica at, Guy's Hospital: 6 Finsbury Circus, E.C. (C. 1874–6.)
1878	Muir, James C. P.: 44 Cornwall Road, Westbourne Park, W.
1875	Murphy, Shirley F., 19 North Villas, Camden Square, N.W.
1868	Myers, Arthur Bowen Richards, Surgeon to 1st Battalion of the Coldstream Guards: Vincent Square, Westminster, S.W. (C. 1877–9.)
1873	Myrtle, Andrew S., M.D.: Harrogate.
1874	Nankivell, Arthur Wolcot, Resident Surgeon, St. Bartholomew's Hospital, Chatham.
1875	Nettleship, Edward, Ophthalmic Surgeon to, and Lecturer on Ophthalmology at, St. Thomas's Hospital: 4 Wimpole Street, Cavendish Square, W.
Orig Memb	Norton, Arthur Trehern, Surgeon to, and Lecturer on Anatomy at, St. Mary's Hospital: 6 Wimpole Street, W. (C. 1874–6.)

Elected

Orig Memb Nunn, Thomas William, Consulting Surgeon to the Middlesex Hospital: 8 Stratford Place, Oxford Street, W. (C. 1873–4.)

Orig Memb Ogle, John William, M.D., Consulting Physician to St. George's Hospital: 30 Cavendish Square, W. (C. 1867–8.)

1868 †Ogle, William, M.D., Physician to the Derbyshire General Infirmary: 98 Friar Gate, Derby.

1869 Oldfield, E., M.D.: Surinam.

1868 Oppert, Francis, M.D.: Germany.

1877 Ord, William Miller, M.D., Physician to, and Lecturer on Medicine at, St. Thomas's Hospital: 7 Brook Street, Hanover Square, W.

1876 Ottley, Walter, M.B., Demonstrator of Anatomy at University College: 93 Ladbroke Grove, Notting Hill, W.

1877 Owen, Isambard, M.B., Medical Registrar, St. George's Hospital: 41 Gloucester Gardens, Bishop's Road, W.

1875 Page, Herbert W., M.C., M.B., Assistant Surgeon to St. Mary's Hospital: 28 New Cavendish Street, W.

Orig Memb Paget, Sir James, Bart., D.C.L., LL.D., F.R.S., Sergeant-Surgeon Extraordinary to H.M. the Queen; Surgeon in Ordinary to H.R.H. the Prince of Wales; Consulting Surgeon to St. Bartholomew's Hospital: 1 Harewood Place, Hanover Square, W. (V.P. 1867–8, P. 1869–70.)

1873 Parker, Robert William, Assistant Surgeon, East London Children's Hospital: 8 Old Cavendish Street, W.

Orig Memb Pavy, Frederick William, M.D., F.R.S., Physician to, and Lecturer on Medicine at, Guy's Hospital: 35 Grosvenor Street, W. (C. 1869–71.)

Orig Memb Peacock, Thomas Bevill, M.D., Consulting Physician to St. Thomas's Hospital, Consulting Physician to the City of London Hospital for Diseases of the Chest: 20 Finsbury Circus, E.C. (C. 1867–8, V.P. 1869–71.)

1879 Peel, Robert: 130 Collins' Street East, Melbourne, Victoria.

1874 Phillips, Charles Douglas F., M.D., Lecturer on Materia Medica at the Westminster Hospital: 2 Grosvenor Square, W.

Orig Memb Pick, Thomas Pickering (C.), Surgeon to, and Lecturer on Anatomy at, St. George's Hospital; Surgeon to the Belgrave Hospital for Children: 13 South Eaton Place, Eaton Sq., S.W. (S. 1874–7, C. 1878–80.)

Elected	
1871	†Playne, Alfred, M.B.: Maidenhead.
1875	Pollock, George David, Surgeon in Ordinary to H.R.H. the Prince of Wales; Consulting Surgeon to St. George's Hospital: 36 Grosvenor Street, W.
1868	Pollock, James Edward, M.D. (C.), Physician to the Hospital for Consumption and Diseases of the Chest: 52 Upper Brook Street, Grosvenor Square, W. (C. 1878–80.)
1871	Poore, George Vivian, M.D. (C.), Assistant Physician to University College Hospital: 30 Wimpole Street, W. (C. 1879–80.)
1873	Port, Heinrich, M.D., Physician to the German Hospital: 48 Finsbury Square, E.C.
Orig Memb	Powell, R. Douglas, M.D., Physician to the Hospital for Consumption and Diseases of the Chest, Brompton; Assistant Physician to the Middlesex Hospital: 15 Henrietta Street, Cavendish Square, W. (C. 1874–6.)
1868	Prentis, Charles, Surgeon-Major, Bengal Medical Service: India.
Orig Memb	Quain, Richard, M.D., F.R.S., Consulting Physician to the Hospital for Consumption and Diseases of the Chest: 67 Harley Street, W. (C. 1867–9.)
Orig Memb	Ramskill, J. Spence, M.D., Consulting Physician to, and Lecturer on Medicine at, the London Hospital; Senior Physician to the National Hospital for the Paralysed and Epileptic: 5 St. Helen's Place, Bishopsgate Street, E.C.
1873	Ransford, Gifford, M.D.: 27 Gloucester Place, Hyde Park, W.
1868	Rasch, Adolphus A., M.D., Physician for Diseases of Women to the German Hospital: 7 South Street, Finsbury Square, E.C.
1877	Rayner, Henry, M.D., Lecturer on Mental Diseases at St. Thomas's Hospital: Middlesex County Lunatic Asylum, Hanwell, W.
1874	Ree, Frederick G.: Royal India Asylum, Ealing, W.
Orig Memb	Rees, George Owen, M.D., F.R.S., Consulting Physician to Guy's Hospital: 26 Albemarle Street, Piccadilly, W. (V.P. 1871–3.)
1868	Reeves, Henry A., Assistant Surgeon to the London Hospital: 8 Grosvenor Street, W.
Orig Memb	Reynolds, John Russell, M.D., F.R.S., Consulting Physician to University College Hospital: 38 Grosvenor Street, W. (C. 1867–8.)

Elected	
1868	Rice, Michael W., M.D.: 34 Cadogan Place, S.W. (C. 1876–8.)
Orig Memb	Ringer, Sydney, M.D., Professor of the Principles and Practice of Medicine in University College, and Physician to University College Hospital: 15 Cavendish Place, W. (C. 1871–2.)
1877	Rivington, Walter, M.S., M.B., Surgeon to, and Lecturer on Anatomy at, the London Hospital: 22 Finsbury Square, E.C.
1873	†Roberts, David Lloyd, M.D., Physician to St. Mary's Hospital, Manchester: 23 St. John Street, Manchester.
1875	Rogers, William Richard, M.D.: 56 Berners Street, Oxford Street, W.
1877	Roth, Bernard M. S.: 48 Wimpole Street, W., and 18 Grand Parade, Brighton.
Orig Memb	Rouse, James, Surgeon to St. George's Hospital, and to the Royal Ophthalmic Hospital, Charing Cross: 2 Wilton Street, Grosvenor Place, S.W. (C. 1875–7.)
1874	Rowland, Edward R.: Pelham Lodge, Isleworth.
1868	Sanderson, Hugh James, M.D.: 26 Upper Berkeley Street, W.
Orig Memb	Sanderson, John Burdon, M.D., F.R.S., Jodrell Professor of Human Physiology in University College: 26 Gordon Square, W.C. (S. 1867–9, C. 1870, V.P. 1871–3.)
1878	Sangster, Alfred, M.B., Lecturer on Skin Diseases at the Charing Cross Hospital: 7 Old Burlington Street, W.
1873	Savage, George Henry, M.D.: Bethlem Royal Hospital, St. George's Road, S.E.
1877	Seaton, Edward, M.D., Physician to the Nottingham General Dispensary: 8 Oxford Street, Nottingham.
1869	Sedgwick, Leonard William, M.D. (C.): 2 Gloucester Terrace, Hyde Park, W. (C. 1879–80.)
1878	Semon, Felix, M.D.: 59 Welbeck Street, Cavendish Square, W.
1875	Sherwood, Arthur Paul, Eastbourne.
1876	Shuter, James L., M.B.: St. Bartholomew's Hospital, and Lawn House, Tufnell Park Road, Holloway, N.
Orig Memb	Sibley, Septimus William: 7 Harley Street, Cavendish Square, W. (C. 1871–4.)
Orig Memb	Simon, John, D.C.L., F.R.S., Consulting Surgeon to St. Thomas's Hospital: 40 Kensington Square, W. (V.P. 1867–70.)

Elected	
1873	Simpson, George A. Malcolm, M.D., C.M.: Hampstead Lane, Highgate, N.
1879	Skerritt, Edward Markham, M.D.: Coburg Villa, Richmond Hill, Clifton, Bristol.
1877	Skinner, William A., 45 Lower Belgrave Street, Eaton Square, S.W.
1872	Slight, George, M.D.: 25 Brewer St., Regent St., W.
1875	Smith, Gilbart, M.A., M.D., Assistant Physician to the London Hospital; Physician to the Royal Hospital for Diseases of the Chest, City Road: 68 Harley Street, Cavendish Square, W.
1868	Smith, Heywood, M.D., Physician to the Hospital for Women, and Physician to the British Lying-in Hospital: 2 Portugal Street, Grosvenor Square, W.
1868	Smith, Protheroe, M.D., Physician to the Hospital for Women: 42 Park Street, Grosvenor Square, W.
Orig Memb	Smith, Thomas (V.P.), Surgeon to, and Lecturer on Clinical Surgery at, St. Bartholomew's Hospital, and Surgeon to the Hospital for Sick Children: 5 Stratford Place, Oxford Street, W. (C. 1869–71. V.P. 1880.)
1873	Smith, William Johnson, Surgeon to the Seamen's Hospital, Greenwich, S.E.
1873	Smith, William Wilberforce, M.D.: 2 Eastbourne Terrace, Bishop's Road, W.
1868	Snow, Wm. V., M.D.: Richmond Gardens, Bournemouth.
Orig Memb	Southey, Reginald, M.D., Physician to, and Lecturer on Forensic Medicine and Hygiene at, St. Bartholomew's Hospital: 6 Harley Street, Cavendish Square, W. (C. 1867–70, 1876–8, S. 1873–5.)
1876	Squire, Balmanno, M.B.: 24 Weymouth Street, Portland Place, W.
1879	Staples, Francis Patrick, Assistant Professor of Military Surgery, Netley: Army Medical Department, Royal Victoria Hospital, Netley, 24 First Avenue, Queen's Gardens, West Brighton.
Orig Memb	Stewart, Alexander Patrick, M.D., Consulting Physician to the Middlesex Hospital: 75 Grosvenor Street, W. (V.P. 1872–4.)
1871	Stewart, William Edward: 16 Harley Street, Cavendish Square, W.
1874	Stirling, Edward C., M.B., Lecturer on Physiology at St. George's Hospital: 60 Great Cumberland Place, Hyde Park, W.

Elected

1878 Stokes, William, M.D., Professor of Surgery, Royal College of Surgeons, Ireland; Surgeon to the Richmond Surgical Hospital: 5 Merrion Square North, Dublin.

1878 Strugnell, Frederick William, 45 Highgate Road, Highgate, N.

1878 Sturge, William Allen, M.D., Assistant Physician to the Royal Free Hospital: 9 Wimpole Street, W.

1872 Sutherland, Henry, M.D., Lecturer on Insanity, Westminster Hospital: 6 Richmond Terrace, Whitehall, S.W.

1868 Sutro, Sigismund, M.D., Senior Physician to the German Hospital: 37A Finsbury Square, E.C.

Orig Memb Sutton, Henry Gawen, M.B., Physician to, and Lecturer on Pathology at, the London Hospital; and Physician to the City of London Hospital for Diseases of the Chest: 9 Finsbury Square, E.C. (C. 1878.)

1876 Symonds, Horatio P.: 35 Beaumont Street, Oxford.

1868 Tatham, John, M.D., Assistant Physician to the Hospital for Consumption and Diseases of the Chest: 12 George Street, Hanover Square, W.

1878 Tayler, Francis Thomas, B.A., M.B., 224 Lewisham High Road, S.E.

1875 Taylor, Frederick, M.D. (*Hon. Secretary*), Assistant Physician to Guy's Hospital: 15 St. Thomas's Street, Southwark, S.E. (S. 1879–80.)

Orig Memb Teevan, William F. (C.), Surgeon to the West London Hospital: 10 Portman Square, W. (C. 1880.)

Orig Memb Thompson, Edmund Symes, M.D. (C.), Physician to the Hospital for Consumption and Diseases of the Chest; Gresham Professor of Medicine: 33 Cavendish Square, W. (C. 1880.)

Orig Memb Thompson, Sir Henry, Knt., Surgeon Extraordinary to H.M. the King of the Belgians; Emeritus Professor of Clinical Surgery in University College: 35 Wimpole Street, W. (C. 1867–8.)

Orig Memb Thompson, Henry, M.D., Fellow of St. John's College, Cambridge; Consulting Physician to the Middlesex Hospital: 53 Queen Anne Street, W. (V.P. 1875–7.)

1872 Thornton, William Pugin, Surgeon to the Hospital for Diseases of the Throat; Surgeon to the Marylebone Dispensary: 42 Devonshire Street, Portland Place, W.

1876 Thrupp, James Godfrey.

1877 Tibbits, Herbert, F.R.C.P. Ed.: 68 Wimpole Street, Cavendish Square, W.

ELECTED

1874 TRAVERS, WILLIAM: 2 Phillimore Gardens, Kensington, W.

1877 TWEEDY, JOHN, Assistant Surgeon to the Royal London Ophthalmic Hospital: 18 Harley Street, Cavendish Square, W.

1878 TYSON, WILLIAM JOSEPH, M.D.: 89 Sandgate Street, Folkestone.

1868 VENNING, EDGCOMBE: 87 Sloane Street, S.W. (C. 1876–8.)

1876 WADHAM, WILLIAM, M.D., Physician to, and Lecturer on Clinical Medicine at, St. George's Hospital: 14 Park Lane, W.

1868 WAGSTAFFE, WILLIAM WARWICK, Assistant Surgeon to St. Thomas's Hospital. (C. 1878.)

1869 WALKER, JOSEPH, Dental Surgeon to the Westminster Hospital: 22 Grosvenor Street, W.

1875 WALSHAM, WILLIAM J., Demonstrator of Anatomy and Operative Surgery at St. Bartholomew's Hospital, Surgeon to the Metropolitan Free Hospital and to the Royal Hospital for Diseases of the Chest: 27 Weymouth Street, Portland Place, W.

1870 WARWICK, RICHARD ARCHER, M.D., Surgeon to the Richmond Infirmary: 5 Hill Rise, Richmond, S.W.

1876 WATERS, JOHN H., M.D.: 101 Jermyn Street, St. James's, S.W.

1868 WATKINS, EDWIN T., M.D.: 61 Guilford Street, W.C.

Orig Memb WATSON, WILLIAM SPENCER, M.B. (C.), Surgeon to the Great Northern Hospital; Surgeon to the Royal South London Ophthalmic Hospital: 7 Henrietta Street, Cavendish Square, W. (C. 1880.)

1879 WATTEVILLE, ARMAND DE, M.A., B.Sc.: 13 Old Cavendish Street, W.

Orig Memb WEBER, HERMANN, M.D., Physician to the German Hospital: 10 Grosvenor Street, W. (C. 1867–71, V.P. 1873–5.)

1876 WEIR, ARCHIBALD, M.D., St. Mungho's, Great Malvern.

1868 WELLS, THOMAS SPENCER, Surgeon in Ordinary to H.M.'s Household; Surgeon to the Samaritan Free Hospital: 3 Upper Grosvenor Street, W. (C. 1873.)

1874 WHEELHOUSE, CLAUDIUS GALEN, Senior Surgeon to the Leeds General Infirmary, and Lecturer on Surgery, Leeds Medical School: Hilary Place, Leeds.

1868 WHIPHAM, THOMAS TILLYER, M.D. (C.), Physician to, and Lecturer on Clinical Medicine at, St. George's Hospital: 37 Green Street, Grosvenor Square, W. (C. 1878–80.)

1874 WHISTLER, W. M., M.D.: 28 Wimpole Street.

Elected	
1871	Wight, George, M.B., C.M.: 428 Liverpool Road, N.
1879	Wilcox, Henry, M.B.: 170 Lewisham High Road, S.E.
Orig Memb	Wilks, Samuel, M.D., F.R.S., Physician to, and Lecturer on Medicine at, Guy's Hospital: 77 Grosvenor Street, W. (C. 1871–2.)
Orig Memb	Willett, Alfred, Surgeon to St. Bartholomew's Hospital: 36 Wimpole Street, W. (C. 1872–5.)
Orig Memb	Williams, Charles Theodore, M.D., Physician to the Hospital for Consumption and Diseases of the Chest: 47 Upper Brook Street, Grosvenor Square, W. (C. 1877–9.)
1870	Williams, William Rhys, M.D., Commissioner in Lunacy: 19 Whitehall Place, S.W.
1876	Williamson, James Mann, M.D.: Ventnor, Isle of Wight.
Orig Memb	Willis, Francis, M.D.: Braceborough, Stamford.
1868	Wiltshire, Alfred, M.D. (C.), Joint Lecturer on Obstetrics, and Assistant Physician-Accoucheur, St. Mary's Hospital: 57 Wimpole Street, W. (C. 1880.)
1880	Wood, John, F.R.S., Professor of Clinical Surgery in King's College, London, and Senior Surgeon to King's College Hospital: 61 Wimpole Street, Cavendish Square, W.
1879	Woodward, George P. M., M.D., Deputy Surgeon-General: Puckeridge, Hertfordshire.
1872	Yeo, J. Burney, M.D., Physician to King's College Hospital; Assistant Physician to the Brompton Hospital for Consumption: 44 Hertford Street, Mayfair, W.

REPORT

OF THE

COUNCIL OF THE CLINICAL SOCIETY.

DECEMBER 1879.

THE Council is able to congratulate the Society on its increasing prosperity, in respect alike to its finance, the number of its members, the ample supply of important papers read at its meetings, and the valuable discussions which have taken place. The year opened with a balance at the bankers' of 253*l.* After all liabilities have been met, and after the purchase of 100*l.* of Consols, the balance that remains amounts to 212*l.* Fifty-five communications, the largest number yet reached, are presented in the 'Transactions' published at the opening of the Session; and the volume is enriched by six chromolithographs and five woodcuts.

The Society has had to lament the death of several members, whose loss has been deeply and universally felt, both within these walls and throughout the whole profession. Mr. Callender, the first Surgical Secretary of the Society, from 1867 to 1880, and President during 1877–1879; Dr. Murchison, who did so much valuable work for the Society, and who was elected a Vice-President in 1872; Dr. Tilbury Fox and Mr. Maunder, always very active members; Dr. Beigel, a regular attendant at the early meetings; Dr. Rendle, Mr. T. B. Hay, and Dr. Harry Leach have all passed away during the present year. Twenty resident and

seven non-resident members have been elected; and Mr. Heath, the Treasurer of the Society, has been appointed a Trustee in the room of Mr. Callender.

The Council, to render the 'Transactions' more easy of reference, has directed the preparation of a copious general index to the twelve volumes already published. This will shortly be issued as a separate volume.

New regulations, providing for the exhibition of living specimens in the anteroom, before and after the meetings, have been introduced, in order, on the one hand, to foster and develop the Clinical character of the Society, and, on the other, to insure that, as far as possible, the regular business of the evening, as previously arranged, may proceed without interruption. Papers relating to living specimens thus exhibited are read, in their turn with other communications, in the order in which they are handed in to the Secretaries.

To meet an objection raised at the last annual meeting that, as a complete list of the officers and members of Council was prepared by the Council, the members of the Society were deprived of the power of selection, a notice is printed at the foot of the ballot-papers, to the effect that any names which members may desire to vote for may be added in the spaces left blank, in place of a similar number of names to be erased from the list.

Several Sub-Committees of the Society have been sitting during the year. That for the investigation of Dr. Powell's case of Leprosy has made its report. Those on the action of Chloral, and on the incubation-period of certain acute diseases, will shortly conclude their labours. Other Committees—one on Hyperpyrexia, one on Keloid, and one on Excision of the Hip-joint—are still at work.

CLINICAL SOCIETY OF LONDON.—BALANCE SHEET 1878–79.

1879		£	s.	d.	1879		£	s.	d.
	To balance from last account	253	8	5		By cost of printing, and binding Vol. XII. of 'Transactions'	98	11	0
	„ Arrears of subscriptions for 1877–78	1	1	0		„ „ „ illustrating	57	15	3
	„ Subscriptions for 1878–79	246	15	0		„ Postage of Vol. XI., binding, extra copies, and back volumes	7	2	6
	„ Admission fees from 20 new resident members	42	0	0		„ Royal Medical and Chirurgical Society, payment for use of rooms, &c.	47	5	0
	„ Admission fees from 7 new non-resident members	14	14	0		„ Refreshments and attendance at meetings	31	10	0
	„ Dividends on £400 Consols	5	17	6		„ Printing, stationery, postages, &c.	11	12	1
	„ Dividends on £500 Consols	7	6	11		„ Mr. Wheatley for secretarial work, making index, &c.	8	8	0
	„ Sale of 'Transactions'	19	5	6		„ Collection of subscriptions	10	11	0
						„ Cost of advertising, and Messrs. Longmans' commission on sale of 'Transactions'	5	15	7
						„ Cheque book	0	5	0
						„ Purchase of £100 Consols	99	0	0
						Balance at Society's bankers	212	12	11
		£590	8	4			£590	8	4

Amount of Stock standing in the names of the Trustees, January 1, 1880, £500 3 per cent. Consols.

CHRISTOPHER HEATH, *Treasurer.*

Audited and found correct { SIDNEY COUPLAND, M.D., W. SPENCER WATSON, } *Auditors.*

HOWARD MARSH, *Hon. Sec.*

PRESIDENT'S ADDRESS.

I VERY sincerely thank you for again electing me as your President. I shall strive to justify my re-election by endeavouring, as far as I can, to promote the objects for which the Clinical Society was established; and I believe that I shall best advance them, this evening, if I abstain from trespassing upon your time with a formal address. Indeed, I could not say anything upon the subject of clinical science which is not familiar to my hearers, and has not been already well said by my predecessors in this chair.

I may, nevertheless, be pardoned if I refer briefly to the nature of the work which it was proposed at the formation of the Clinical Society that it should undertake. The question is one which rarely comes before us, and I think the present occasion, when taking the President's chair at the commencement of a new period of office, a very suitable one for begging your attention to it. We shall be more likely to succeed in attaining our purpose if we keep our standard steadily in view.

The Clinical Society was founded for the exclusive purpose of receiving and debating reports of interesting cases, and not for that of reading any other kind of communication, however interesting or important. There are several other societies to which such papers may properly be sent; and, as we have our own work cut out for us, we do not desire to intrude upon the functions or province of these societies. I think we shall do well to keep this fact always in view.

Further, it was designed that the cases read before us were to be very accurately and fully reported as regards all their essential facts. There was to be—I quote almost the precise words of the original resolution, passed at the meeting when the Society was founded, and afterwards incorpo-

rated in one of the laws of the Society—there was to be a complete record of the state of the patient when first seen, investigated according to the most approved clinical methods; a statement of the family and personal history of the patient, including a narrative of his present illness previous to his coming under observation; a record of the state of the patient when last seen, or, in fatal cases, a record of the post-mortem examination; together with an abstract of the progress and treatment of the case since first observed.

The first Council resolved, after due deliberation, that, as a rule, ten minutes would be long enough for ordinary communications, and directed the President to stop any paper which exceeded this length, until the Society had expressed its opinion as to the propriety of the communication being continued. Almost of necessity this rule has been liberally interpreted by your Presidents, who have sometimes allowed papers which seemed very interesting to be continued beyond the fixed time. It is possible that the rule may not always have been enforced with sufficient strictness, but it has undoubtedly tended much to lead contributors of cases to condense their reports; and I may observe that it does not follow, because a case as read before the Society is short, it may not, with the sanction of the Council, be amplified for publication in the 'Transactions.' It may be most useful to detail many facts for future study and reference which would, if read in full at a meeting, have so complicated the narrative that it would have been difficult to discuss it.

If I may be permitted to offer a suggestion as to our future work, it would be to express a hope that we shall be able to devote a larger share of our attention to therapeutics. Accurate knowledge of the action of medicines is, perhaps, the greatest desideratum of the present day. This was one of the objects set before us by Sir Thomas Watson when he inaugurated the first meeting of the Society for scientific work; and I fear that the remarks which he then made are still not altogether inapplicable to medical practice. He said that it had been a lifelong wonder to him 'how vaguely, how ignorantly, how rashly, drugs are often prescribed. We try this, and, not succeeding, we try that; and, baffled again, we try something else.' Now, nothing would conduce more to the accuracy of therapeutics than series of cases carefully treated upon a similar plan, and brought to the test of a searching debate before this Society. Improved methods of investigating disease have given greater accuracy

to diagnosis; and, mainly from the labours of our sister—the Pathological—Society, our acquaintance with the effects of disease upon the organs and tissues of the sick, as seen after death, has of late years been greatly enlarged; but our knowledge of the precise action of drugs and other appliances for the treatment of disease still leaves much to be desired.

I said last year, on taking the chair as President, what is, I believe, universally admitted, that the Society has already done good service; and I also expressed a hope that we should all of us endeavour to do still better. It is with the aim of enforcing, as far as I can, this view that I have ventured to submit these remarks to your notice.

COMMUNICATIONS.

I.—*Report on a Case of Leprosy with Enlarged Glands. Read October* 1879.

THIS case, of which an account was given to the Pathological Society in September 1878, was kindly placed under the care of Dr. Douglas Powell for further observation by the late Surgeon-Major T. H. Porter.* The patient was admitted into the Middlesex Hospital under Dr. Powell's care on January 21, 1879, and was soon afterwards brought before the Society for inspection, and a committee was appointed further to observe the case, consisting of Drs. Cayley, Liveing, Duckworth, and himself.

The facts in the history of the patient may be briefly recapitulated as follows:—

He was aged 24, a corporal in the 12th Regiment, born in Cambridgeshire, of healthy parents, and one of four children, the rest of whom were living and healthy. Up to the period of his enlistment in 1872 he had had no important illness, and his health continued good until May 1874, when he had inflammation of the glands of the left groin, consequent upon his having pulled off a small wart from the penis. From December 1874 he was stationed for three years at

* 'I cannot permit this opportunity to pass without endeavouring to express my own personal sorrow, and my sense of the great loss the profession has sustained, by the death of Surgeon-Major Porter. Mr. Porter's large-hearted kindliness, enthusiastic love of his work, and admirable skill and judgment as a military surgeon, were well known to all who came into even brief association with him. Mr. Porter took a great personal interest in the patient whose case is here related. He had described the case in the "Pathological Transactions" as one of Hodgkin's disease, feeling much doubt at the time whether the leprous thickening of the skin might not have been secondary to the gland enlargement. I confess at the time to have had the same doubts. Mr. Porter was, however, very pleased when he heard that the case was to be further observed and reported upon by a committee of this Society.'—R. Douglas Powell, January 1880.

Ferozepur and Calcutta. He contracted gonorrhœa in October 1874, but had no other illness until December 1876, when he was admitted into hospital at Calcutta for 'rupia,' affecting the inner aspects of the thighs, armpits, and back of neck: 'parts where he sweated most.' His hair at this time began to fall off, and he was treated with antisyphilitic remedies, and subsequently with arsenic and cod-liver oil.

Patient states that at this time he also took some 'gurgurine,' which, however, was different in taste from the gurgun oil given him at the Middlesex Hospital. In March 1877 he first noticed a lump under the lower jaw, soon followed by enlargement of the other glands in that region, spreading to the back of the neck and clavicles, and affecting the glands in the axilla and groin. He was sent home and admitted to Netley Hospital in February 1879, the glands having steadily increased in size, whilst his bodily weight diminished from 10 st. 8 lbs. in December 1876 to 8 st. 7 lbs. in February 1878. His general appearance at this time is well shown in the accompanying photograph (*vide* 'Trans. Path. Society,' vol. xxix., plate xviii.), which is in very striking contrast with that taken soon after his enlistment. The thickened, wrinkled, and furrowed skin, of a dusky brown colour, the almost entire absence of hair, and the marked enlargement of the superficial glands, were the chief features at this time present. They were associated with great dryness of the throat, thickening of the fauces, and intolerable thirst. The general health was, however, fairly good, the appetite good, and abdominal and urinary functions natural. He was placed on liberal diet,* with fruit and vegetables, and various remedies, including iron and cod-liver oil, but he nevertheless lost ground, all the measurements over occiput and neck showing decided increase in the size of the glandular and cutaneous swelling. In May he was placed upon $\frac{1}{10}$ gr. of phosphorus in $\frac{1}{2}$ oz. cod-liver oil, three times a day, and soon afterwards his condition began markedly to amend, and by September, notwithstanding temporary interruptions in the treatment on four occasions from slight attacks of jaundice, the glands had much diminished in size, all the measurements over them being smaller, although the patient had gained considerably in flesh; drowsiness and thirst greatly lessened. The skin had become more red in appearance, which Mr. Porter did not, however,

* Including abundance of animal food, with eggs, milk, porter, and 1 lb. of fruit daily.

attribute to the phosphorus. The patient was discharged from Netley in December, and went home; his appearance had so changed, however, in the course of two years that he was not recognized by his friends until he spoke to them.

The following note, taken January 29, corresponds with patient's condition when presented to this Society:—

Urine acid, sp. qr. 1015, no albumen.

Jan. 29.—Patient looks about 45 years old, manner very alert and intelligent. Face large and furrowed, of a bluish-red colour. Deep transverse and vertical furrows on the forehead give a very striking 'leonine' expression. The nose and lips are thickened, the head small and bullet-shaped, covered with scanty hair. Still some thickening of the scalp on each side of the occipital protuberance, but patient states that this has much diminished. No hair on face, eyebrows absent, but eyelashes are unaffected. The lobe of each ear is thickened, brawny feeling, pendulous, measuring $1\frac{1}{4}$ in. from meatus to tip on each side. With the exception of a small induration immediately below the ear there is no distinct glandular enlargement on the left side. A chain of slightly enlarged glands extends along the anterior border of the trapezius muscle on the right side from the mastoid process to the root of the neck. A large gland can be felt also in the submaxillary region on this side. The skin of the neck below the chin hangs loosely in folds. The glands of the axilla are still large, about the size of filberts, and are surrounded by much loosely matted cellular tissue. The glands in the groin are large and smooth, similarly surrounded by soft doughy cellular tissue.

The skin of the body, especially on the anterior aspect, is covered with numerous raised papules. The surface is harsh and dry, and very irritable. The skin of the face is smooth. There is no œdema of the legs, but a mahogany-coloured pigmentation, distinctly mottled over the tibia, elsewhere evenly distributed. The soles of the feet are of almost normal colour. There is an ulcer on the dorsum of the right foot, between the first and second toes, which commenced as a blister, attributed by the patient to friction of the boot, but which has now sharply-cut edges and is of somewhat triangular shape still, with an unhealthy-looking base, although it is slowly healing. Also an ulcer on the left hand. There is no anæsthesia in any part of body or extremities. The temperature has been normal since admission, and the urine free from albumen.

Weight of patient, 10 st. 7 lbs. (weight one month ago, 9 st. 10 lbs.).

The blood under the microscope shows no excess of leucocytes.

Haust. Gent. Alk. ʒvj. Aq. Chlorof. ad ℥j. b. d.

Convalescent diet, with vegetables. Porter (one pint).

Feb. 1.—Ulcer on foot healing rapidly.

„ 3.—Urine sp. gr. 1015, no albumen.

„ 4.—Blood examined, no filariæ found.

„ 10.—Urine 1015, acid, no albumen. Skin very irritable at night. Has been taking a warm bath each second night since Jan. 25. Weight 10 st. 9 lbs.

Feb. 12.—Toes and edges of feet, also tips of fingers, are becoming whiter, and of a natural colour. The lower lip has become thicker since admission. Urine acid, sp. gr. 1020, no albumen.

	Mar. 20, 1878.	Sept. 21, 1878.	Feb. 1879.
Circumference just over eyebrows	—	—	21 in.
„ over mouth	22 in.	20½ in.	19½
„ just below chin	21	17½	17½
„ over cricoid cartilage	17½	15½	14½
„ round base of neck	18½	16¼	15½

Feb. 17.—The ulnar nerves at the bend of the elbows are observed to be distinctly thickened. The surface again tested carefully for anæsthesia with negative results. Ulcer on dorsum of foot now healed. Ordered gurgun oil, ½ dr., liq. potassæ, 10 minims, aq. cinnamomi, 1 oz. t.d.s.

Feb. 26.—Aspect improved, colour of skin generally paling, the improvement being especially marked in the hands, extending for some distance upwards from the nails and round the margin from the palms. Skin over body still very irritable. Takes the oil well. Bowels act rather loosely twice daily. Is gaining weight.

Urine, sp. gr. 1025, acid, cloudy with lithates, no albumen. On adding nitric acid to the cold urine a ring of a rich maroon colour appears. After boiling with the acid it becomes uniformly so coloured.

On March 3 the blood taken from the finger at 2 P.M., patient having dined at 12.30, was examined by means of the hæmacytometer, and was found to contain 5,590,000 red corpuscles in a cubic millimètre, with 17,500 white corpuscles; showing a somewhat excessive quantity of the red and by no means a deficiency in the white elements. The patient appeared to be improving in all general respects, and to be

even making some progress for the better as regards his leprous condition. He was brisk and active in the wards, fetching and carrying for the nurses, and was anxious to get some appointment as porter in the Hospital. On March 5, however, he complained of headache and pains in the limbs and cough. The temperature became slightly raised, 101°, and the pulse quickened. Bronchial râles were audible over the chest. The next day (6th), at 4 o'clock, he was seized with a severe and prolonged rigor, and the temperature rose to 104·2°, pulse 140, with nausea and headache. Some pain and tenderness appeared along the inner side of the right arm, where at the elbow there was a slight abrasion; the axillary glands on that side became tender and swollen, and, in short, it seemed as though he were about to have an attack of erysipelas. The temperature kept high, the redness and swelling involving the skin only, and, erythematous in appearance, spread over the right arm, and red brawny patches appeared on the forearm on the evening of the 7th. At the same time dulness and tubular breathing, with crepitant râle, indicated a patch of commencing pneumonia in the left supra-mammary region. On March 8 and 9 the whole of the right arm had become red, swollen, tender, and tense, spreading up to the shoulder, and then terminating in a well-defined raised margin. The cutaneous inflammation had also extended in a more patchy manner over the forearm, and on the inner aspects of both thighs similar erythematous-looking patches were observed, very sharply defined, very tender and painful, some having abraded surfaces as though from scratching in their centres; although thickened, the skin could be pinched up, showing that the deeper structures were not involved. The lung condition had somewhat extended, and moist bronchial râles were present at both bases.

March 10.—Urine acid, 1028, no albumen, deposit of lithates. Had passed a restless and delirious night. Tongue dry and brown in the centre. A large patch of erythema over the upper two-thirds of the left inner thigh, terminating on the outer side in a well-defined curved border reaching to line of anterior spinous process. Glands of this groin much swollen, with much superficial tenderness; but they were soft, not brawny. Right thigh affected to less extent. The inflammation had subsided from the right forearm, but had extended to the wrist, and from the upper arm to the shoulder. Breathing more vesicular over the front of the left chest. Sub-crepitant râles, principally heard in supra-mam-

mary region; some also present in right infra-mammary region. Some friction in left axilla. Pulse 120, soft, compressible. Tongue moist, furred. Temperature still high.

In the course of the next few days the erythematous inflammation successively extended to the right axillary and thoracic region, and upwards to the neck, the left arm, shoulder, and upper chest being similarly affected; a sharply-defined curved line extending from the inner third of the clavicle along the margin of the sternum to the nipple level, and from thence to lower axilla, marked the limits of the inflamed surface in this region on March 12. A similar margin 3 inches above the knee marked the boundary to which the spreading erythema had at this period advanced. Pulse 144, weak and thready. Respiration 40, laboured. Tongue dryish, with white fur and prominent papillæ. Patient slightly deaf from the quinine taken in 5-grain doses every four hours. The hands, face, neck, scalp, and upper part of back, with legs and feet, became in turn affected. On the 13th the back of the left hand was tender, swollen and discoloured, as though from commencing gangrene, the outer and inner fingers being similarly affected. Sensibility was, however, unaffected. On March 14 flexible collodion was painted over the face, which was swollen and tender on both sides. On the following day the swelling had somewhat lessened, although the left eye was closed by œdema. The erythema, fading over the back of the neck, had extended down the trunk, and by the 20th had passed over the calves of the legs to the feet. The most affected portions of the legs were painted with collodion.

On the 20th the spleen—repeatedly examined before—was for the first time noted to be enlarged, extending about an inch below the cartilages. Sub-crepitant râles were heard in the left infra-mammary region, and rather metallic râles in the supra-mammary region. Expectoration abundant; viscid aërated mucus, somewhat pigmented. The patient's general condition was of a typhoid character, with dry, brown, cracked tongue; delirium at night; passing urine occasionally in bed.

On the 22nd the urine, become dark and smoky-coloured, gave strong blood reaction with ozonic ether and guaiacum test, and contained $\frac{1}{12}$ albumen.

23.—Temperature last evening 103·4°. P. 120. R. 36. Urine 36 oz. in twenty-four hours, 1025, acid, albumen $\frac{1}{8}$.

24.—Tongue dry and brown in the centre. Patient ap-

peared to have no loss of sensibility over cutaneous surface. Spleen could only just be felt below the costal margin. Percussion defective between clavicle and nipple on the left side, with very superficial and metallic moist crepitant râles. A few larger and deeper clicks also heard—over right side, subcrepitant and sibilant râles.

25.—Urine 28 oz.

27.—The swelling of the right hand, which had subsided, returned, with redness and pain. Tongue moist, coated. Some eczematous sores at corner of mouth and alæ of nose. Respiration 40; expiration laboured, abdominal. Urine 1025, dark red colour, giving blood reaction, and containing blood casts; albumen $\frac{1}{3}$.

30.—Death, apparently from pulmonary œdema. Patient was sensible the preceding day, and had no convulsions.

Post mortem examination, seventeen hours after death.—Rigor mortis well-marked. Body fairly nourished; a considerable layer of adipose tissue in the abdominal wall. No enlargement of the glands of the neck visible externally, nor any distinct axillary swellings seen as patient lay on the back. Some fulness perceptible in inner and upper aspect of thighs below Poupart's ligament. The skin of the face had a pinkish, slightly livid appearance; it was supple, and nowhere notably thickened, smooth, and on forehead and each side of nose it appeared even tense and shiny. The eyebrows were represented by only a few sparse and short hairs. The skin of the trunk was more or less pigmented everywhere, but in a less obvious degree than before the acute illness. Many white circular scars were observed over the chest and abdomen, as though from some former ulcerative eruption. The skin over the lower extremities was of a dirty brown colour, dry and harsh, and more or less roughened with desquamating epithelium and the remains of collodion application. The right ulnar nerve was traced from the upper arm to the palm of the hand. It presented no obvious swellings in its course. The lymphatic glands in the neck and submental region were manifestly enlarged. They were separate from one another, and varied in size from a broad-bean to a French bean. Firm on section, their cut surface presenting a smooth, glistening appearance, with points of vascular injection: thus giving a mottled look to the cut surface of some of the glands, an uniform red tint to others. The axillary glands were obviously but not extremely enlarged, discrete, and resembling in other characters those of

the neck. In the upper femoral region on the right side the glands were less separate. Many seemed to be fused into a tough mass of tissue of irregular shape, in which the individual glands could, however, still be seen on section presenting a glistening surface of pale yellowish tint, with bands of white fibrous tissue especially in the central portions of the mass, imbedding and principally spreading along the distribution of the afferent vessels. No distinction could be seen between the cortical and medullary portions of the glands. The mass of fibrous tissue containing them was flattened, and lay in the hollow over the vessels, thus causing but little external tumour. The glands on the left side were essentially similar. No cheesy deposits were found in any of the glands, nor did any of them yield the lardaceous reaction with iodine.

The lungs (left 22 oz., right 29 oz.) were intensely hyperæmic, and presented numerous but widely disseminated minute foci of lobular pneumonia; the larger and smaller bronchi containing much muco-pus. At the posterior apex of the right lung the pulmonary pleura was puckered over an area of about a shilling, and on section at this point a patch of fibrous thickening spread into the lung-substance for a short distance, resembling a superficial cicatrix. A similar but less extensive patch of cicatricial induration was met with on the outer surface of the upper lobe near its lower border. The left lung was adherent to the pericardium and to the chest-wall posteriorly. For about three inches at its lower and anterior angle it was converted into a tough opaque mass traversed by dilated bronchial tubes (atelectasis). No puckerings were observed in the upper lobe, but in the lower lobe, deep in the substance of the lung, a patch of induration was met with, smooth and glistening on section, with ill-defined margins, traversed by blood vessels and surrounded by a zone of hepatisation. The whole patch was smaller in area than the thumbnail. The bronchial glands were enlarged, but gave no reaction with iodine.

The heart (11½ oz.), stomach, and intestines were normal; the mesenteric glands not enlarged, nor were any of the retroperitoneal glands larger than peas. The *liver* (56 oz.) was soft, swollen, and very vascular, markedly fatty, but the lobules well defined. The *spleen* (14 oz.) large, its capsule thickened and opaque, and wrinkled, as the organ rested on the table. The splenic tissue was pale and very soft, and contained no nodules of growth. The *kidneys* (right 8 oz., left 8 oz.) were of large size, capsules somewhat adherent; surface mottled. On section the cortex was observed to be

pale and swollen, streaked by injected vessels, and abnormally soft and pliable. The testes were not diseased. No reaction with iodine was obtained with any of the abdominal organs.* Some blood was removed from the superior cava and examined by the hemacytometer by Drs. Coupland and Powell with the following results:—

A drop taken from *lower portion* of test-tube in which blood was collected gave 5,500,000 red corpuscles to the cubic millimètre. A drop taken from near upper surface of blood gave 3,890,000 red corpuscles to the cubic millimètre. Therefore an *average* of about 4,700,000 per cubic millimètre. No excess of white corpuscles.

Portions of the ulnar nerve, skin, glands (inguinal and cervical), and lungs were reserved and hardened for microscopical examination. Sections from the skin showed a decided increase in the connective tissue, especially about the vessels, and many collections of granulation—cells were observed in each section. These cells were rounded and apparently free, not being imbedded in any stromal tissue—they might well be extruded leucocytes. Epithelium of sebaceous glands indistinct; lumen of gland filled with oil. No pigmentation was seen. Hairs twisted and, with few exceptions, buried in their sacs, their sheaths thickened. The gland sections showed a marked deficiency of adenoid elements, parts of each section consisting of tracts of fibroid tissue, from which their elements had wholly or in great part disappeared: the connective sheaths of the vessels were notably thickened. The sections of lung from the indurated portions above referred to showed these to consist of an interstitial small-celled growth, with thickening of vessels and alveolar walls, the alveoli being occupied by loose catarrhal cells.

Remarks.—The above case presented the clinical features of one of Elephantiasis Græcorum of the tuberculated variety of but short (some 2 to 2½ years) duration, and unattended with any altered sensibility or other evidence of nerve-change. It was peculiar in being associated with very great enlargement of the glands of the superficial lymphatic system. This feature of gland enlargement, although greatly exaggerated in the present case, is not unusual in leprosy.† The amendment of the patient's general condition, and the diminution

* It should, perhaps, be stated that of these organs the condition of the suprarenal capsules was not definitely ascertained, owing to an oversight; but had they been diseased they could scarcely have escaped observation.

† 'The lymphatic glands, especially of the groins, become transformed into hard, prominent, and painless tumours.'—Hebra on Diseases of the Skin ('New Syd. Soc. Trans.,' vol. iv. p. 145).

in the size of the glands, while under the influence of phosphorus, was also remarkable; and with the reduction in the size of the glands some lessening in the thickness of the skin took place, whether by the mere diminution of turgescence owing to the relief of superficial vessels from pressure, it would be difficult to say; at all events the leprous features of the case did not materially lessen. The termination of the case by a spreading erythema—if we may so term the cutaneous attack—was also remarkable; more in the extent of surface attacked, the acuteness of the process, and in the simultaneous involvement of the lungs—possibly by a similar erythematous inflammation of the bronchial and alveolar surfaces—than in the mere fact, not uncommon in leprosy, of portions of the skin surface being affected by ephemeral inflammation. Although the external features were, as above said, those of leprosy, and the minute anatomical conditions found were quite in accordance with the disease being an early stage of that disease, the blood was rather redundant than deficient in red corpuscles, and no filariæ nor any excess of leucocytes were found in it. The condition of the skin, save for some increase in the fibrous tissue, might perhaps have been accounted for by the acute inflammatory process it had recently undergone; but the altered conditions of the sweat glands and hair could not be thus accounted for. The enlargement of the spleen was incident to the febrile state. The gland conditions present were those of atrophy and fibroid induration, which may have been secondary to preceding hyperplasia of gland elements. How far phosphorus may have been active in bringing about this atrophy is very uncertain.

We have availed ourselves of the kind assistance of Dr. Vincent Harris in further examining the microscopic sections, and we think it best to append his report as it stands, since, although in general accord with our own, Dr. Harris has had special facilities for studying normal nerve structure, and his account of the nerve alterations will, therefore, be especially interesting, and valuable for reference in future cases.

(Signed) W. Cayley.
Robert Liveing.
Dyce Duckworth.
R. Douglas Powell.

DESCRIPTION OF PLATE I.

(Illustrating Dr. Powell's Case of Leprosy. From Drawings by Dr. V. D. Harris.)

FIG. 1 represents a section of the lung, with a nodule of new tissue, and a great increase of interstitial tissue (Hartnack Oc. 3, Obj. 7 and 8).

(*a*) Circumscribed nodule of small-celled tissue.

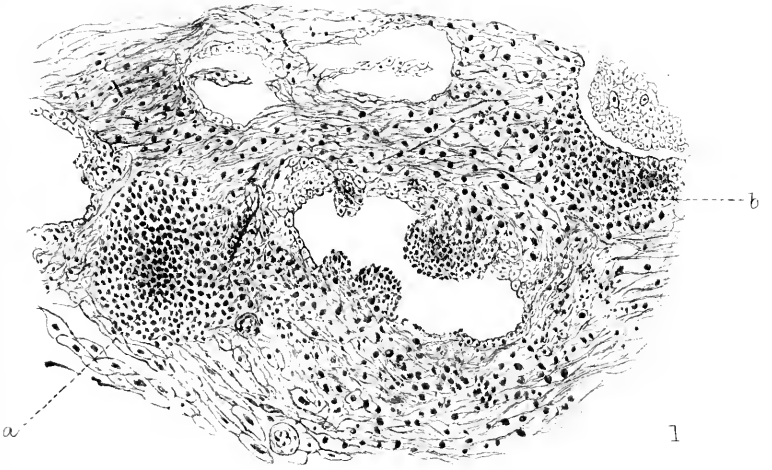
(*b*) Small-celled tissue.

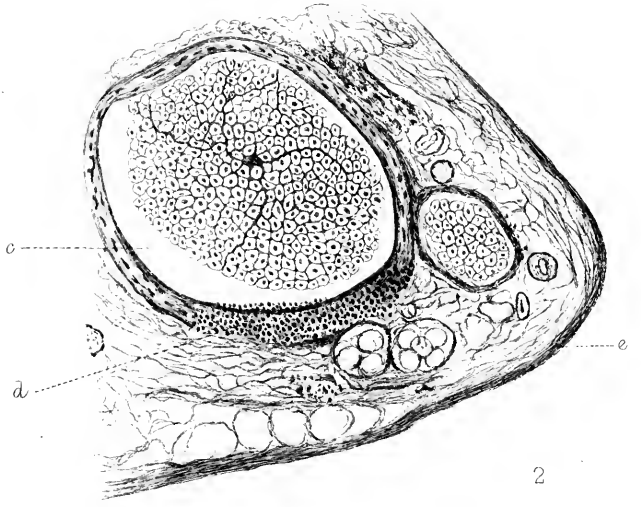
FIG. 2 represents part of a section of a nerve (semi-diagrammatic. Hartnack, Oc. 3, Obj. 7 and 8).

(*c*) Enlarged intraperineural lymph space.

(*d*) Thickened perineurium, with abundance of small cells.

(*e*) Very thick epineurium.


b
a
1


c
e
d
2

Report on certain Microscopic Specimens of various Tissues obtained from a Case of True Leprosy. By V. D. Harris, M.D.

Skin.—The derma or cutis vera is infiltrated with small-celled (rudimentary) fibrous tissue. The blood vessels are strangely dilated and filled with blood, but their walls are not abnormally thickened. The epithelium of the sebaceous glands is very indistinct, and the lumen of each gland filled with oil. There are no sweat glands to be distinctly made out in the sections.

Lymphatic gland shows a somewhat marked increase of its stroma, from a similar small-celled tissue; but this is obscured by the lymph corpuscles which have not been removed from the sections. The blood vessels are manifestly thickened.

Kidney presents signs of *cloudy swelling*, the epithelium of the tubuli uriniferi, especially the convoluted tubes, being granular, and the lumen of the tubes filled with granular *débris*. In addition to these changes, probably of acute inflammation, there are also to be seen small patches of new tissue like that seen elsewhere. The Malpighian capsules are thickened, and tufts enlarged. The changes in the kidneys appear to be only just commencing.

Lung.—Masses of a similar structure are to be made out, as elsewhere. Here they seem almost exactly like true tubercle.

Nerves.—Very obvious changes, more marked here than anywhere else. The great sheath or epineurium is very thick, and in parts, evidently from the like small-celled (? inflammatory) tissue, which approaches closely to adenoid tissue, and in parts is evidently developed fully into fibrous tissue. Coats of the blood vessels thickened. Perineurium thickened and contracted; lymph spaces inside perineurium much enlarged. Endoneurium thickened. Nerve tubes pressed together, with thinning of their Schwann's sheath, and shrinking (very marked) of axis cylinders. The small-celled tissue here and there can be traced even within the perineurium.

From a general examination of the specimens the changes seem to follow the blood vessels very closely.

II.—*On a Case of Myxœdema, or Universal Mucoid Degeneration of the Connective Tissue of the Body.*

By Dyce Duckworth, M.D. *Read October* 10, 1879.

SARAH MANGER, æt. 34, married for ten years, the mother of three children, came to St.Bartholomew's Hospital on Nov. 5, 1878, complaining of weakness and of failing health for more than two years previously. She first observed that her eyelids swelled, also the right side of her face. Subsequently swelling was noticed generally about the body. Her voice had been 'thick' for two years, and was sometimes more and sometimes less affected. A sister, two years younger, accompanied her, and reported that her manner had changed during the last two years; that she was 'strange in her ways,' more irritable in temper, forgetful, and abstracted, also disposed to fall asleep at any time. Some of her friends had in consequence been led to surmise that she had become addicted to intemperate habits.

The patient was a well-grown woman, 5 ft. 4 in. in height, and weighed 12 st. 6 lbs. in June 1877. Her face was of peculiar aspect; complexion waxy and sallow, with a little colour on the cheeks, and several moles. The eyelids were puffy and œdematous-looking. The expression was singularly stolid, immoveable, and listless. The voice was thick and somewhat snuffling, and the articulation rather slow. Her hands seemed puffy on the backs, and are stated to be sometimes more swelled than at others. The face is alleged also to be more puffy on the side on which she lies all night. She thought her hands were more clumsy than formerly, and felt 'sleepy and dead' in the mornings; they also tingled. On examination no marked change in sensibility was detected. She could pick up pins without difficulty.

On examination there was found some general conditions of xeroderma, most marked on the extremities, but no œdema.

My first impression was that this patient was the subject of chronic nephritis, and I forthwith examined her urine, which was found to be of sp. gr. 1010, acid, void of albumen and glucose. The heart was found natural. The tongue was clean, protruded naturally, and appetite was good. Bowels constipated. She was treated with steel.

Nov. 19.—Urine again examined. No albumen.

Dec. 11.—Weight 10 st. 9 lbs. Two stones lost in 18 months.

The urine was frequently examined, and never observed to contain albumen. The specific gravity was commonly about 1010. Further complaint was made of feeling cold constantly. The feet were always cold, and she never felt too hot even in the warmest weather. The patient was conscious of her change of manner.

I now regarded the case as one of the peculiar affection described by Dr. Ord as Myxœdema. After study of his cases, I was enabled to recall two, if not three, similar instances which had come before me in former years, and had completely puzzled me. I had believed them to be obstinate forms of anæmia, and was always expecting some special renal symptoms to manifest themselves.

The family history threw no light upon the case. The father was paraplegic for a year before his death, and succumbed to 'asthma.' The mother is alive and well. The father's mother was alleged to have died of dropsy. Three sisters are living and well; one brother died of variola, and another has not been heard of for a long time.

Her children were brought for me to see. They are fairly healthy, with the exception of the youngest, aged 3 years, which is very rickety.

April 16.—No noteworthy change noticed. There is less puffiness of the face than formerly. Hands more numb towards night, and loss of feeling increasing in them. Sometimes staggering in walking. I had a water-colour drawing made of her face. The patient began to be more irritable and sullen in her manner, and somewhat resented the clinical study that we were desirous to follow out upon her.

The thyroid gland could not be felt, and there seemed to be more fatty deposit in the left than in the right supra-clavicular fossa.

Oct. 4.—I saw the patient again, not having had an opportunity of examining her for nearly six months. The disorder had made evident progress. The face looked more puffy and waxy. The hands were more clumsy and expressionless. The voice was very snuffling, and the lips moved less than formerly. She was slower in her movements, and more inclined to be silent and reserved in manner. She came to see me because I wrote asking her to return as an out-patient, and she had no complaint to make, save of some

little painfulness in the fatty nodule already described as situate above the left clavicle.

This case adds one more example of this rare affection to the histories already collected. Hitherto, so far as I am aware, no cases have been recorded by other than London physicians, and no instance has yet been observed in the male sex, or indeed in any subjects but adult females.* The other cases that I recall to my memory also occurred in middle-aged women. One of these attended my out-patient room for several years, and the affection made steady progress for the worse. The flabby integuments became more and more waxy and blubbery, and the features flattened out and assumed an ugly and repulsive aspect.

I can recall the snuffling voice and the slow languid manner which prevailed in that case, so that I now cannot doubt the true nature of it. The urine never became albuminous while I watched the progress of the case.

It will remain a matter of much interest to follow the life histories of the children of women thus affected. All is negative, so far, respecting the past histories of cases already reported. Women who have been fair and graceful in early life, have become the subjects of this ungainly and peculiar invasion, and no token of it has been seen in other members of the same family. No relation to the ovarian functions has been observed. The disorder has been met with in single and in married women. The most obvious symptoms induced seem referable to mechanical interference with the various special tissues invaded by the mucoid growth. Collectively, they would warrant the idea that a form of cachexia prevailed, having for its seat a definite tract of the most widely spread tissue in the body, along which the special degenerative process spread, and in this progress, not only the integumentary, but every system in the body is invaded. Myxœdema, then, so far as Dr. Ord's careful researches go, is to be regarded as an universal mucoid degeneration of intercellular tissue.

Postscript.—June 21, 1880.—The patient has ceased to attend at the Hospital for about six months, and has left the house she formerly lived in. Hence I cannot communicate with her.

* Since this communication was made a case in a male subject has been described by Dr. Fenn, of Richmond, but it is not yet published.

III.—*Cases of Myxœdema.* By William M. Ord, M.D. *Read October* 10, 1879.

During the last two years there have come under my notice in St. Thomas's Hospital six cases of the disease originally described by Sir William Gull as 'a cretinoid condition supervening in adult life in women,' a disease for which I have since proposed the term 'Myxœdema,' expressive of the morbid change mainly characteristic of the affection. Of one, which ended in death, I propose to give a somewhat full account, using the rest for illustration and comparison.

Susan M., æt. 52, a married woman, mother of five children, was admitted under my care on February 4, 1879. She was an only child; her mother had died dropsical, but, as she had suffered from severe bronchitis for some time, the dropsy was more probably attributable to the chest affection than likely to have been of the same kind as that of which the patient was the subject. The patient appeared to have lived an active hard-working life up to the birth of her last child, twelve years ago. She had also enjoyed good health in a general way, although suffering severely at her confinements. After the birth of each child she had puffing of the face, lasting for a few days. There was no history of intemperance or of syphilis.

After her last confinement the face became puffy as usual, the feet began to swell, and the belly, to use her own expression, 'never went down.' Her strength failed, her activity, bodily and mental, declined; her movements became slower and slower; and the muscles of the neck in particular were from time to time affected with remarkable weakness. Of late she could not keep her head erect; in spite of all her efforts to the contrary it would fall forward, and the chin, resting on the lower part of the neck, would hinder swallowing and even embarrass her breathing. She had become unable to raise herself from a stooping position. Her gait was staggering, like that of a drunken person; she often fell down by reason of the knees giving way; her memory was getting very bad, and her speech slow and laborious. Always of a chilly nature, she had felt the cold acutely of late.

When admitted she had very much the look of a person suffering from general dropsy. Her face was puffy, particu-

larly about the eyelids; both lips, upper and lower equally, were swollen, and the alæ nasi greatly thickened and broadened. None of these parts, however, pitted on pressure. The cheeks were suffused with a uniform deep-pink flush, limited in a striking way at the margin of the orbits. The eyelids and all the skin within the circumference of the orbits were bulging, ridged, and very pale. The face wore an expression at once dull and sad. Over the whole of the body the skin was swollen, unnaturally translucent, dry, rough, and scurfy. The hands were coarse, thick-fingered, very dry, and harsh—'spade-like,' as Sir William Gull has it. The extremities generally were cold and blue. The abdomen was large and protruding, the walls being very lax; but no tumour or tenderness existed. The back was bowed, and there was some lateral curvature to the left. The thyroid body could hardly be felt, and there was some amount of elastic projection above the clavicles.

There was some fluid œdema of the legs and feet. When the patient stood alone—a matter of some effort—her head at once drooped forward on the chest—a crétin-like attitude, already noted by me in a previously published case. On trying to walk she moved slowly, and when a foot was planted on the ground and the body brought over it a series of quivers ran through her whole frame as she slowly brought her muscles to balanced action. Meanwhile it was necessary to be ready to support her, as she distinctly tended to fall, and had, in fact, done so frequently of late. There was no true paralysis, ataxy, or trembling.

Her speech resembled that of the cases recorded. She began by slowly extending the mouth horizontally, then usually made the movements of swallowing, afterwards emitting her words deliberately, and with nasal intonation. Her words were often interrupted by the necessity of clearing the soft palate out of the way, which was managed by little explosive puffs through the nostrils.

When first seen she was very lethargic. She lay for the most part quietly in bed, and was slow to become aware when she was addressed. Although her memory was impaired and her response slow, her feelings were tolerably perfect behind the mist which surrounded them. The special senses were not affected, touch was accurate, heat and cold were keenly felt. As regarded cold her sensations were exceedingly acute. She 'was always cold and shivering.' She did not appear to suffer from any kind of pain, and slept well.

There was some bronchitis; arterial tension; indications of increase in the bulk of the heart; marked feebleness in its action.

The urine was of average quantity; its specific gravity 1015; it contained a trace of albumen, but no sugar or other abnormal constituent, unless a good deal of vesical epithelium and a little oxalate of lime deserve the appellation.

The temperature was 90·8° in the right axilla, 90·2° in the left.

Within a day or two after admission she received news of the death of a daughter who had been long ill, and of the sudden death of her husband. These shocks were followed by a deeper lethargy, relieved occasionally by feeble delirium, during which she had delusions. At times, although not easily roused, she answered rationally questions several times repeated. The mist was evidently deepening, and she sometimes lost her way in it. And so she gradually failed, and died on the fourteenth day of her stay in hospital.

The urine was copious throughout, and always contained a trace, but not more than a trace, of albumen. No casts, blood, or renal epithelium were ever seen.

The temperature generally ranged between 90° and 92°, never exceeding 94°, till two days before death, when it fell to 88° and 87°. On the day of her death it fell to 77°.

At the post mortem examination the lungs were found congested and œdematous, and there was a good deal of fluid in all the serous cavities. The heart was hypertrophied, flabby, and dilated, weighing 12½ ounces. The thyroid body was much reduced in size and indurated. The kidneys were of average size, and of extraordinary firmness, giving to the touch a sensation like that of indiarubber. The surface was smooth, the capsules not adherent.

The microscopical examination of the various parts brings out in great prominence a condition noted in the fatal case previously reported. The fibrillar element of connective tissue and the mucin-yielding interstitial cement are everywhere found in great excess, the fibrils being unusually distinct. The nuclei are also abnormally large and abundant. Hence the connective tissue is everywhere swollen and translucent. In the arteries we may note a massive thickening of the coats, particularly of the adventitia, a great increase of nuclei, and a diminution of the calibre, often approaching obliteration. In the liver the increase of connective tissue

leads to the isolation of cells and of columns of cells. The cells are evidently injured by pressure, and are full of large nuclei, presenting an extraordinary contrast to healthy hepatic parenchyma. (See Plate II.) In the kidney the encroachments of connective tissue in the intertubular region, in the walls of the Malpighian bodies, around the vessels of the tufts, and around the arteries, are very obvious. So also in the skin, in both kinds of muscle, and in the spinal cord. Everywhere the connective tissue appears to have undergone a degeneration, a retrograde change, bringing it into close resemblance with the mucin-yielding connective tissue of the umbilical cord.

With the case now described the others which have come under observation may now be briefly compared. All were adult women, between 30 and 50; all married; all had borne children. In three out of the six the commencement of the swelling is noted to have followed a confinement. There was in no case a history of intemperance or syphilis. Collateral heredity is indicated in one, a younger sister presenting symptoms of the disease.

The translucent, dry, rough skin was observed in all; so was the pink flush on the cheek. In all there was lethargy, slow intelligence, slow perception, associated with a complete consciousness of shortcomings. In all the leathery intonation and clumsy utterance were well marked; all showed imperfect power in regulating alternate or combined movements of muscles. In none were the senses impaired, nor was paralysis or ataxy present. In two cases, besides that just described, mental weakness advanced to aberration. One of these two cases is now under my care in Charity Ward, St. Thomas's Hospital, but is too ill to leave her bed.

The temperature has been decidedly below the average in all these cases, increasingly so as the disease has advanced. In the case now under care the daily record has been always low, and on one day 93·4° was registered as the axillary temperature. And another case, now under my friend and colleague Dr. Harley, shows depressed temperature in conjunction with mental disorder. This patient was presented by me at the Medico-Chirurgical Society two years ago, and I show photographs of her taken at different periods.

The urine was slightly albuminous in three far advanced cases, not in the other three, all of which, however, had been proceeding at least three years.

The depression of temperature now noted was not re-

DESCRIPTION OF PLATE II.

(Illustrating Dr. Ord's Paper on Cases of Myxœdema.)

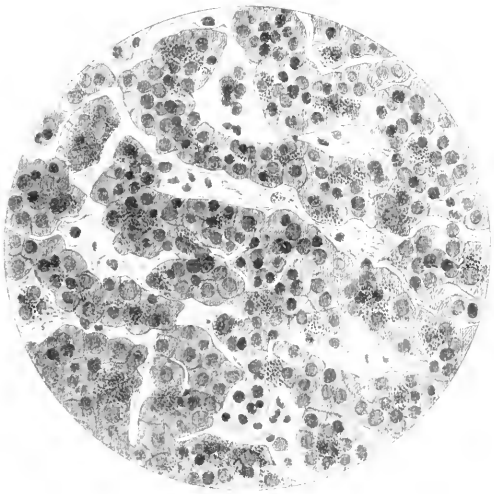
FIG. 1.—Portrait of a patient suffering from myxœdema—E.K., æt. 52, in-patient at St. Thomas's Hospital, under Dr. Ord.

FIG. 2.—Portrait of Susan M., from a photograph taken one week before her death.

FIG. 3.—Section of the liver, showing large intercellular accumulations of substance, either finely fibrillated, or faintly granulated like ground glass; also numerous large nuclei (Hartnack, Oc. 3, Obj. 8, tube out).

1.

2.



3.

R. Mintern, lith. Mintern Bros. imp.

Dr Ord's cases of Myxœdema.

cognised in my earlier cases, which were observed before the clinical thermometer was much used. In a previous paper I have attributed the nervous enfeeblement presented by these cases to the padding of peripheral nerve-ends by the gelatinous connective tissue, and the consequent failure of regular and complete stimulation of nerve-centres from the periphery. This I compared with the effects of varnishing the skin. Now, varnishing the skin is known (according to the experiments of Valentin and others) to cause rapid depression of temperature, and I am inclined to attribute the cooling of these patients to the condition of the skin, rather than to their feebleness.

In conclusion, I have to thank my friend Mr. Seymour Taylor for his valuable aid in the preparation of the microscopical preparation now exhibited.

The mouth, kidney, and thyroid body of the patient S. M. are also exhibited, together with photographs of several other cases.

IV.—*A Case of Empyema in which Portions of Ribs were Excised.* By Frederick Taylor, M.D., and H. G. Howse, M.S. *Read October* 10, 1879.

GERTRUDE McK., æt. 6, was admitted, under the care of Dr. Taylor, into the Evelina Hospital on January 22, 1877. Eleven weeks previously she had had pain in the stomach and in the left side, and the medical man who attended her said it was inflammation of the lungs and pleurisy. After about three weeks she was better, but was never quite well, and was able to be up only a little while every day.

On admission she was a bright-looking child, with dark hair and eyes, and long eyelashes. She slept and ate well, had no cough, and her bowels were regular. On examination of the chest, February 16, the left side was found shrunken, and less moveable than the right during respiration. In front the percussion note was rather impaired; the breath sounds were clear at the apex, not feeble, but accompanied by crepitation at the base. Posteriorly there was stomach resonance nearly up to the angle of the scapula, dulness above this, with feeble respiratory murmur, but no adventitious sounds.

She was ordered cod-liver oil on February 18, and quinine

on the 23rd. The temperature during January and February ranged between 97° and 99°. The history and physical signs clearly indicated pleurisy, but from the shrinking of the chest it was supposed that the fluid had been absorbed, and that there remained only collapsed lung and thickened pleura. Early in March the temperature began to rise, and on the 14th it is noted that she was not so well. The sleep was more disturbed, and the bowels were often loose. At this time the chest was tender over the left base, back, front, and side. Here also was absolute dulness, with sharp crepitation outside the left nipple and below the axilla. During the next month there was no improvement, and scarcely any alteration in the physical signs. She slept well, had a good appetite, and coughed but little; on the other hand, the bowels were often loose, and the temperature varied from 99° to 103°, evening exacerbations being very marked. The left chest continued shrunken, with impaired movement, dulness corresponding closely to the extent of the lower lobe, feeble respiratory murmur, and no adventitious sounds. The diagnosis now wavered between tubercle on the one hand and empyema on the other, but as no other part of the chest showed physical signs but the left base, it was determined to explore the chest. On April 16 the needle of an injection-syringe was introduced near the angle of the scapula, and some thin creamy pus flowed into the tube. Chloroform was now given, and a free incision made in the posterior axillary line. About 10 ounces of rather liquid, yellow, offensive pus at once came out, and two gum-elastic tubes were introduced, one at each end of the incision, to keep the wound open and facilitate the discharge of pus and cleansing of the cavity, if found necessary. The operation was performed antiseptically, and gauze dressings were applied.

Considerable improvement was at once apparent. The temperature fell to 99°, and was only on three occasions above 100° during the next seventeen days. She slept and ate well, had no cough; the bowels became regular, and she increased in weight. The chest was washed out antiseptically every day; the pus became less and less offensive, and diminished in quantity; and on May 3rd she was allowed to get up. A fortnight later the pus appeared to be retained, the temperature again fluctuating, and on May 20 a counter-opening was made in a lower space, and a tube drawn through the two apertures, a lotion of carbolic acid (1 in 40) being used

for syringing out the cavity. As a result the temperature became much steadier, only occasionally over 100°; and on June 10 the continuous tube was removed, and one was inserted in the lower opening only.

The discharge was diminished in quantity, and syringing was only necessary once in three days. On the 21st the amount of discharge was so small that the tube was withdrawn; but the evening exacerbations immediately appeared, and six days later it was necessary to insert the tube again, and a quantity of offensive pus came away. The upper opening had now quite closed, and the chest had fallen in somewhat.

Seeing now that it was more than two months since the opening of the chest, and that pus continued to be secreted, setting up hectic symptoms unless it had free discharge, the question was discussed whether any good would result from excision of portions of the ribs, with the object of increasing the aperture for discharge, and possibly allowing the ribs to fall in more completely towards the collapsed lung. Consultation was held with Mr. Howse, and on July 2 the following operation was performed. A free incision was made transversely along the course of the lower opening, and another was carried vertically up to the upper opening; by these the seventh, eighth, and ninth ribs were exposed. The periosteum was stripped off, and about 1½ inch of each rib was removed by means of the bone forceps. The ninth rib was the one first exposed, and on removal of a portion it was found that the chest communicated with the exterior only by a very small aperture at the posterior part of the incision. The rest of the wound was filled up by what appeared to be thickened pleura. The portions of the seventh and eighth rib were then removed without any further exposure of the pleural cavity itself, and without any alteration of the position and relations of the remaining portions of these ribs. Dressing forceps were now introduced into the pleural cavity through the old aperture, and partly by their means, partly by the knife, the opening was enlarged so as to admit the forefinger freely. Two drainage tubes were then inserted.

The portions of rib removed measure each about 1½ inch in length. The seventh and eighth ribs are nearly united by two bridges of bone, one lying in front of, the other behind, the channel which one of the drainage tubes had formerly occupied. Some ossific deposit is also present on the lower border of the ninth rib at a point corresponding to the position

of the lower drainage tube, but whether the ninth space was completely bridged, like the seventh, cannot be said. (Plate VI., Fig. 2.)

She went on well at first, and the temperature was mostly below 98° for the next fortnight; there was very little discharge, and the wound was dressed every day; but granulations were rapidly filling it up. In the beginning of August the temperature again rose, and on the 6th the wound was nearly closed, leaving only a small sinus stretching upwards, forwards, and inwards for about an inch. There was not much discharge. The sinus was ordered to be injected every day with tincture of iodine and water. On the 24th there was nothing left of the wound but a small healthy granulating surface, with a little discharge from it. Iodine injections and antiseptic dressings were discontinued, and zinc ointment was applied. A week later, however, there was a good deal of offensive discharge; and the temperature was fluctuating in a very marked manner. In the latter half of September diarrhœa set in, and the urine was found to be albuminous. On October 9 a tent was introduced into the sinus in order to dilate it, and on its removal the following morning about 14 ounces of offensive pus came away. A tube was again inserted, and antiseptic dressings and weak iodine injections were resumed. In this condition she was discharged February 11, 1878. While away from the hospital the cough increased, and the discharge continued in varying quantity. Diarrhœa set in during July and August, and towards the end of this time the face swelled. She was admitted again on September 4. She was then very thin, with pale puffy face and anxious expression. Pulse 124, small; temperature 100°. The thighs, legs, and feet were œdematous, ascites was present, and the liver reached three fingers' breadth below the ribs. The left chest was much flattened, both above and below the sixth rib, which was very prominent in its whole course from scapula to sternum. The movements of the side were impaired; tactile vibration was greater under the clavicle than on the right side, but lower down it was diminished. Resonance was everywhere impaired, and the respiratory murmur was feeble and accompanied by crepitation. The heart's impulse was in the third intercostal space, and the resonance on the right side extended to mid-sternum. Posteriorly the resonance of the left side was everywhere impaired, but especially below the angle of the scapula; the breath sounds also were most feeble at the base;

vocal vibration was diminished all over; and there was a little crepitation at the upper part only.

Diarrhœa was now her constant trouble, with only moderate fever, the temperature fluctuating between 97° and 100° F. On October 9 she complained of headache, and the following day was unconscious. She recovered her senses on the 11th, but was again insensible on the 12th until her death at mid-day.

The post mortem examination was made on October 15. On opening the chest the cavity of the empyema was found to occupy chiefly the posterior part of the chest, and reached from base to apex. The pleura lining it was especially thick and dense over the ribs; it contained very little pus. The lung itself was airless, except just at the apex. There was no tubercle.

Portions of the sixth, seventh, eighth, ninth, and tenth ribs, with the integument and sinus, are now shown, the pleura and periosteum having been removed from their internal surfaces. There is a bony bridge uniting the sixth and seventh ribs, and another between the seventh and eighth ribs. The eighth rib shows plainly the seat of its division by the operation, but it is difficult to say where the seventh rib was cut, as the bridges uniting it with its fellows above and below are situated some distance apart, and the inner surface of the rib itself is quite smooth. Just below the point of excision of the ninth rib is situated the sinus, which will admit a small catheter.

The peritoneal cavity contained some pus in its lower and back parts, and a little fluid besides. There was some lymph on the surface of the liver, but no adhesion of the intestines to one another. There was no tubercle. The liver and kidneys were lardaceous, the former weighing 51 oz., the latter 7 oz. The intestines were also lardaceous, but free from ulceration. The mesenteric glands were enlarged, but not caseous.

Remarks.—The interest of this case lies in the attempt to arrive at a successful termination by the operation of excision of a portion of the chest-wall. In three cases recorded in the 'Berliner Med. Wochenschrift,' and referred to in the 'London Medical Record' (August 1876), the discharge of pus and the process of washing out the cavity were much facilitated, and in one of them the success of the case was furthered by the falling in of the side which followed on the excision. In the present case it was hoped that both these indications would be carried out by means of the operation. First a free

incision, then a counter-opening had been made, but they had rapidly closed up, and every attempt to remove the tube was followed by increased fever and hectic. Moreover, from the long duration of the illness prior to evacuation of the pus, it was probable that the lung was much collapsed and unable to expand; and therefore it would be an advantage if the chest-wall could be made to fall in more than it was likely to do spontaneously. And this, no doubt, did take place to a certain extent, for when the patient was admitted for the last time, five months after the operation, the chest was considerably flattened, and the sixth rib, which was next above the highest operated on, stood out as a prominent oblique ridge on the side and lower front of the chest. But, in reference to the other indication, the operation must be said to have failed: the object was entirely frustrated by the remarkable powers of repair which in certain directions the child throughout exhibited. The first incision had granulated up rapidly; and after a counter-opening had been some time in use the upper opening quickly closed, when the through drainage tube was discontinued. Moreover, the ribs themselves, stimulated by the mere presence of a tube between them, had thrown out bridges of bone by which they became united. The same process was repeated after the operation of excision, for in three weeks the wound was nearly closed; and the condition of the ribs found after death shows how thoroughly the repair of the bones had taken place.

It is probable that in another case of the kind an alteration in the method of operation may better attain the desired results. In the present case the ribs were cut down upon, then divided and removed, the periosteum being stripped off and left behind in so doing. This was the more readily done as the periosteum in a growing child is thicker and more easily detached than in the adult. The natural result of this, viz., the very rapid replacement of the bone, was not fully taken into account at the time. We were also the less desirous of interfering farther with this periosteal tissue that it was so fused with the thickened pleura as to be indistinguishable from it.

The outcome of this case, however, would seem naturally to suggest the advisability in any other case of the kind of removing very much more freely the *periosteal tissue*, even if this necessitated also the removal of the thickened pleura, and the absolute laying bare of the pleural cavity. Seeing the condition of the lung in many of these cases, and the

rapidity with which wounds of the chest-wall contract and close, this would appear likely to have no prejudicial effects. It would, moreover, allow another complication which this case presented to be treated with better effect. While examining the sinuses in this case previous to the operation it was found that the probe could be passed in one or two directions into apparently distinct cavities. It would thus appear as if partial adhesion, as a result of the previous drainage operations, had taken place between contiguous surfaces of the pleura, leaving sinus-cavities elsewhere. Now, the removal of rib and periosteum, even if it involved removal of the thickened pleura and exposure of the lung, would probably permit much more free exploration of these cavities and would allow of better provision being made for their drainage; and from the larger gap, and consequently greater slowness in closing, these cavities would be much more likely to have time to fill up permanently.

Finally, the operation would appear to have erred in *not having done enough*, rather than in having done too much; and the only objection that we can see to the more extended operation which is here recommended would be that in it it would be necessary to cut away the intercostal vessels and nerves of the corresponding spaces. These vessels, however, rapidly contract and then cease bleeding; and even should hæmorrhage continue they would be readily controlled by ligature in the larger space laid bare. The sacrifice of these comparatively unimportant vessels and nerves would be of little moment as compared with the very serious issue to the patient if this condition were allowed to continue.

V.—*Two Cases of Acute Rheumatism.* By R. Southey, M.D. *Read October* 24, 1879.

Case I.—Cerebral Rheumatism without Hyperpyrexia.

Fred Garden, 23, coachmaker, temperate, a poorly nourished, anæmic fellow, who said he had been feeling ill for some little time.

First seized with pain and stiffness in all his joints on Sept. 10, and was obliged to take to his bed that evening. Four days later, on Sept. 14, he was brought to the Hospital in a cab.

Condition on admission.—Fourth day of disease. Very

weak, skin perspiring profusely. Temp. 103°. Backs of hands and wrists were red and swollen. Tongue tremulous, moist, only slightly furred, rather red at tip. Anorexia, thirst, bowels open, urine scanty. Thorax small, not well-made. No abnormal lung sounds, area of cardiac dulness normal, apex beat in normal situation. Heart sounds feeble but natural. Slight friction rub at base. Abdomen empty, but nothing abnormal noticed.

Treatment.—Milk diet, beef tea. Hst. sodæ cum magnesiâ.

I saw the patient first on Sept. 16, sixth day of illness. The rheumatic inflammations were then characteristic and well marked; they had shifted to shoulders and ankles and feet. Sleeplessness was the principal complaint. The complete immobility of the patient showed great prostration, and betokened a protracted case and probable bedsores.

Sept. 18. — Cardiac dulness increased, friction sound audible at base.

21.—Less pain complained of; pain in chest spoken of yesterday is not noticed to-day; no fresh joints affected. Manner abrupt and peculiar; was delirious last night, with constant muttering and wandering.

22.—Complains of swelling in arms; says he felt better, that he slept better. Nurse's account is that he was very delirious all night, and really got very little sleep. His own account of himself rationally expressed but quite untrustworthy. Marked tremulousness of hands, but ability to move them.

25.—Complains of general discomfort; does not localise his pains. From this date his temperature was not particularly high; the pulse was feeble and dicrotous; but delirium continued the important and prevailing symptom.

He took all nourishment that was given him—a pint and a half of milk, pudding, two eggs, beef-tea a pint, brandy 4 oz., daily.

An effervescing mixture was ordered on Sept. 26; chloroform, cardamoms, and peppermint on the 28th.

On Sept. 30 I began with conium, first in ʒij. doses; for the jactitation and subsultus had become greater, and the patient's condition rather resembled typhus than rheumatism. Still his tongue was not dry; there was no rash, and no deafness; nay, rather over-acute sense of hearing, the patient catching casual remarks made at his bedside, and answering questions put to others as if they applied to himself; any

word he heard seeming to set his thoughts working in a new direction. The peculiarity of this delirium of cerebral rheumatism deserves attention: the activity of the senses resembles what we observe in delirium tremens. But these patients have no horrors, are seldom noisy; and although they may attempt to get out of bed are easily persuaded to return to it again.

Oct. 1.—I directed nourishment to be given every two hours. Increased the conium to ℥ ss. doses, gave ʒ ss. of bromide with it every four hours, applied an ice-bag to forehead and top of head. As he remained sleepless I ordered a draught of chloral for the night, and of this he took 30 grains, in two doses, and then slept well for four hours.

2.—Patient was conscious, and complained a good deal of pains in knees, back and elbows; he was not perspiring nearly so much; his respirations, which had been attended by sibilus, had fallen from 46 to 40. There was still some tremulousness and jactitation, but his aspect was better. He showed great loss of muscular power, and lay helpless in bed.

The same treatment was continued.

Day of Disease	Date	Pulse	Temp.	Resp.	Treatment
4	Sept. 14	96	103	24	
6	16	88	104·1		
7	17	...	104	...	Hst. Quin. c Pot. Iodid.
8	18	84	102		
9	19				
10	20	96	103·4	36	
11	21	88	102·6	32	
12	22	84	102·8		
13	23	84	102		
14	24	104	103·8	40	
15	25	84	102·8	36	
16	26	84	102·4	...	Hst. Efferv. c Sp. Chloroform.
17	27	92	102·4		
18	28	100	103·8	40	
19	29	100	103·4		
20	30	108	103·8	...	Succus Conii. ʒij. 4tis. horis.
21	Oct. 1	102	102·6	46	Conium c Pot. Bromid. 4tis. horis.
22	2	112	102·9	40	Chloral 30 grains.
23	3	110	102·4	36	
24	4	96	100·9	30	
25	5	100	99·8	33	
26	6	96	99·7	28	
27	7	112	100·2	36	

Respiration and temperature gradually fell on Oct. 4. A night draught of chloral was again repeated, and he obtained a good night's rest. His face had a shrunken look, but his general condition improved daily; he took all nourishment well, asked for meat; perspired very little.

5.—Allowed pudding extra. A slight relapse followed.

7.—Feels in pain all over. Pulse 112, still dicrotous. Temp. 100·2°. Resp. 36. More restless last night. This relapse only lasted two days; he subsequently made a good recovery, and was discharged convalescent.

Remarks.—This is a typical case of cerebral or typhoid rheumatism, complicated, it is admitted, by pericarditis, and attended by such a temperature as is often encountered in acute rheumatism thus complicated. The cerebral symptoms do not occur when the temperature is at its highest, on the sixth and seventh days, but on the twelfth day, when the temperature at its recorded highest was 102·8°. What I wish to point attention to is the peculiarity of the delirium and the whole of the nervous symptoms. They are quite characteristic of the disease; they have been observed by all who have put any similar cases upon record, but have been attributed to alcoholism, and to a nervous system damaged by habits of intemperance. In my opinion alcohol is not found guilty of them, and has really nothing whatever to do with them. It is only a superficial likeness to delirium tremens which is presented. There is delirium, with general tremors; this is, however, not a noisy, busy delirium, with horrors and delusions of an active kind. There is a sort of coma vigil, in which the patient lies muttering deliriously, and is constantly talking to himself. If you arouse him he wakes up apparently all right, says he has no pain, feels very well, and answers your questions in a manner that might throw you quite off your guard. Every statement he makes may be incorrect, and is wholly untrustworthy. Then the muscular tremors increase to choreic jactitation; there is constant twitching and subsultus of the muscles; and finally this condition, as in another case which I watched, and which is recorded in the sixth volume of this Society's 'Transactions,' is succeeded by a state of general muscular paralysis, whether from asthenia or actual palsy of the motor powers I know not; but this I do know, that the patients lie perfectly motionless, and cannot help themselves at all. This case recovered, and I attribute his recovery to the treatment pursued. The bromide and conium may have tranquillised the spinal centres, as Dr. Greenhow

thought they did in a case in which he tried them; but the ice-bag to the head and neck is, I believe, good treatment; safer, because less fatiguing, and as efficacious, I think, as the cold plunge or wet sheet. But neither of these strong measures was indicated by the patient's temperature, which did not amount to hyperpyrexia.

CASE II.—ACUTE RHEUMATISM. *Sudden death on the tenth day, without elevation of temperature, but with the post mortem appearances which have been attributed to hyperpyrexia.*

Harriet Chabot, æt. 20, a fair, short, and lymphatic looking young woman, moderately well nourished, was admitted into Faith Ward, September 23, 1879, with all the ordinary symptoms of acute rheumatism.

It was her third attack within two years, and it was in evidence, both from her own and her mother's account, that the invasion of the symptoms had been gradual, she having suffered aches and pains and malaise for four days before being compelled to take to her bed. On admission she had, however, been in bed five days, so that it might be said to be either the fifth or ninth day of her disease, according as the invasion period is counted or not. I described it as acute rheumatism, relapsing form, fifth day on admission, with old endocardial murmur. Mitral regurgitation, very little hypertrophy. Physical signs upon admission, pain and swelling, with some redness of several joints. Heart's apex beat between fifth and sixth ribs inside nipple. No increase of præcordial dulness. Second sound accentuated over pulmonary artery, systolic murmur heard loudly up and down sternum and towards left axilla.

Pulse 96 to 104. Respiration 28, but easily quickened by slightest movement to 40. Temperature 99·6°.

Tongue furred; urine reported to contain a trace of albumen, to be scanty, high-coloured, sp. gr. 1020; the following day it contained no blood, but deposited much sediment, $\frac{1}{3}^{\circ}$, on boiling, and acidifying. Her history went to show that she never had had scarlet fever, or any other illness, but acute rheumatism; no dropsy ever.

The case was severe but not alarming. I ordered ordinary slop diet, a mouth-wash of borax and pot. chlorat., and a draught of pot. chlorat. gr. v. chloral hyd. gr. v., mist. camphor ℥i, 6tis horis. A tepid bath at 98° to 100° every

night. Fifth night: her evening temperature was 102·2°. Respiration 40. Pulse 101; but she slept well, although her left wrist and right knee gave acute pain upon the least movement.

Sept. 24 (sixth day of disease).—Abatement of evening temperature to 101·4°. Bowels have not acted for four days; nourishment taken fairly; no alteration made in treatment; no purgative given.

Sept. 25 (seventh day).—Morning temperature 97·3°, evening temperature 99·6°; respiration 36, pulse 96. Marked improvement in condition; slept well. Bowels acted spontaneously, tongue cleaner, food taken with more relish. Murmur and physical signs the same. Urine still albuminous slightly.

Sept. 26 (eighth day).—No pain in joints at all; tongue nearly clean; takes food, but is not hungry; passed a good night. Morning temperature 98·4°, evening temperature 99·4°; respiration 20, pulse 90.

Sept. 27 (ninth day).—Fair night, but right knee is more painful, her face looked haggard and pale, lips rather livid—enough to attract my attention and make me inquire fully about and re-examine her. There was no increase of præcordial dulness, no friction sound, but her pulse was very quick and feeble; respiration about 40; only 6 oz. of urine had passed during twenty-four hours; there was no fulness of bladder. The urine collected was acid, sp. gr. 1018, and contained a considerable quantity of albumen. Her bowels, however, had acted four times, and a little water had been passed with the motions. The morning temperature was 101·2°, at 7.30 P.M. it was 102·4°. In the afternoon she began to complain of pain in epigastrium, and vomited a green bilious fluid. Was seen by my house physician, who ordered a blister to heart for supposed pericardial friction. She was perspiring profusely when moved by the nurse, and sat up in bed at about 7.30, and said, 'I can't think why you are so fidgety about me. I'm going on very well.' Was asked if her feet were cold: she said, 'No, they are burning hot.' They only felt warm to the nurse's hand. Afterwards the pain in epigastrium increased, her eyes became wild and staring, her face pale; and although her respirations were only 32 hardly any pulse could be felt at her wrist. She cried out, 'Can no one give me any relief for this pain?' pointing to bottom of sternum. At 12.15 she threw herself back in bed and became unconscious. The heart sounds were irregular and indistinct, and at 12.45 she died quietly,

without convulsion of any kind, having never recovered consciousness.

When I saw her at 2 P.M. on 27th I stopped her chloral and potash draught, ordered 2 oz. of brandy, and citrate of potash draught, with Sp. ammon. aromat. and Sp. æther nitros. aa ʒss. 6tis, and applied chloroform and belladonna liniment to her right knee.

Post mortem twenty-eight hours after death.—No effusion in pleura, pericardium, or peritoneum. Very slight thickening of pericardium at root of aorta. Lungs normal. No clots in pulmonary artery. Heart's cavities distended with greenish much decomposed post mortem clots. Heart's muscular substance of a dirty brown colour; fibres under microscope obscure. No striation distinguishable in them—probably from decomposition.

Aortic valves normal. Mitral valve covered with small vegetations upon its auricular surface; mitral orifice somewhat narrowed. Spleen large and soft; liver soft. Intestines filled with greenish-yellow slimy mucus, exceedingly abundant throughout it. Stomach similarly contained a large quantity of bile-stained viscid mucus, as if from a general catarrhal process. Kidneys pale and soft.

Brain and its membranes normal.

Remarks.—I have prepared none. I prefer that the case should speak for itself. To me it is an intensely interesting one. It furnished a fact I had been long looking out for—sudden death in rheumatism, with appearances of hyperpyrexia, but without any remarkable temperature reached or observed. She died of asthenia, or heart failure, with gradually failing pulse, until this could not be perceived at the wrist. The appearance of the heart did not, to my knowledge of pathology, suggest carditis the very least. That of the kidneys was no more than is found in the subjects of any acute disease who die of pneumonia or fever. To explain it I can only offer what will be accepted as proof of my ignorance—the hypothesis that in rheumatism there sometimes suddenly takes place a great change in the blood itself, which makes this circulate everywhere with difficulty. It will not undergo the proper changes of oxygenation in the lungs; it fails to carry the requisite oxygen everywhere and to circulate properly. If the blood stasis occurs in certain nervous centres hyperpyrexia may attend this local accident. To three clinical symptoms of impending danger—extreme pallor of the face, lividity of the lips, and albuminuria—I

may call attention. They have occurred in other fatal cases of rheumatism I have seen. I know them now to be of almost fatal omen, and wish to direct the attention of the profession to them.

VI.—*The Case of James Orman, Struck by Lightning, on June* 8, 1878. By GEORGE WILKS, M.B. (of Ashford). Communicated by Sir JAMES PAGET, Bart. *Read October* 24, 1879.

ON Saturday, June 8, 1878, about 4.30 P.M., four men were at work near Snave, in Romney Marsh, about eight miles from Ashford, 'topping' willow trees, when the violence of the rain compelled them to take shelter under a hedge; but the storm increasing, they retreated to a shed near by for more efficient protection. Three of them at once entered, but the other, James Orman, stayed by a willow close to the window of the shed to empty his bladder. Scarcely were the three men inside when 'a blaze of lightning rushed in at the door, across the shed, and out at the window,' which it blew before it *into the field.* For a short time they stood 'scared' by the dazzling brilliancy of the lightning and the furious din of the thunder, but, recovering, bethought themselves of their companion's close proximity to the path of the flash, and went to look for him. Hurrying round the shed, they saw the tree partly denuded of its bark, and Orman's boots standing close to its foot, but the man himself lying *naked,* on his back, two yards farther off, calling for help. When they left him a few minutes previously he was completely and strongly clad in a cotton jacket, cotton shirt, flannel vest, cotton trousers, secured at waist and knee with leather straps and buckles; new stout hobnailed boots, hat, watch and chain. *Now* he was lying *naked,* with absolutely *nothing* on him *save part of the left arm of his flannel vest,* conscious, but much burned, and with a badly broken leg. The field was strewn for about 4 rods (*i.e.* 22 yards) with fragments of the clothing in such wise that the door and window of the shed, the tree, the man, and the tatters were all in one plane. This is the condition of the clothes:—

The hat uninjured.

(a.) Back of Trousers.
(b.) Stockings.
(c.) Bark of Willow.
(d.) Boots.
(e.) Front of Trousers.
(f.) Left Arm of Flannel Jacket.

The cotton jacket split in halves down the back (the wrists and front were unbuttoned at the time).

The cotton shirt.—There remain of this the greater part of the right side of the back, the right arm, and the skirt, which, however, is split up the middle, burnt where the

buckle of the waist-belt would have been, and scorched in the region of the right fob, which contained the watch.

The flannel vest is torn diagonally across the middle, and the left arm and shoulder are missing from it—these remained whole upon the man.

The trousers consist of two distinct pieces, anterior and posterior; the latter is made up of the waistband (which was, for the purpose named, unbuttoned), with pockets attached, and the back of the legs as far as the knees, all below being mere shreds and fringe; of the front naught exists but these few shreds.

The belt round the waist had the buckle burst out; the straps at the knees were snapped short off, without injury to the buckles.

The boots, thick, strong, and new though they were, are in a sorry plight; no trace of laces remains save where one or two holes are torn out; the left has the leather torn and twisted into the most fantastic shapes, but the sole is uninjured, and there are no signs of fire upon it; the right has lost the leather from the inner side, heel, and back; the sole is much rent and burnt, the clip is partly unfixed, and one nail is missing from its inner side, while another is loose at the heel.

The stockings are split up the inner side; the right one is blood-stained and scorched.

The watch, an old-fashioned 'turnip,' in an outer case, has a hole burnt right through the case and through the watch itself, as though with a soldering-iron; the right fob, in which it lay, and the adjacent portion of the shirt, are burnt.

The chain was almost entirely destroyed, only a few charred and fused links remaining.

Remarks.—It will be observed that the evidences of fire in the clothing are restricted to parts which were in contact with metal, viz., the burn in the shirt under the waist-buckle, the charred fob and shirt-tail, the heel of the right boot; but the rags and tatters, the shreds, the fact that the man was utterly naked, bereft in an instant even of his boots, and the condition of those boots, bear abundant testimony to the violence of the shock.

He was discharged twenty weeks after the occurrence.

The accident occurred at 4.30 P.M.; the man was brought eight or nine miles from the spot into Ashford, and reached the Cottage Hospital about 7.30 P.M., three hours later. He said

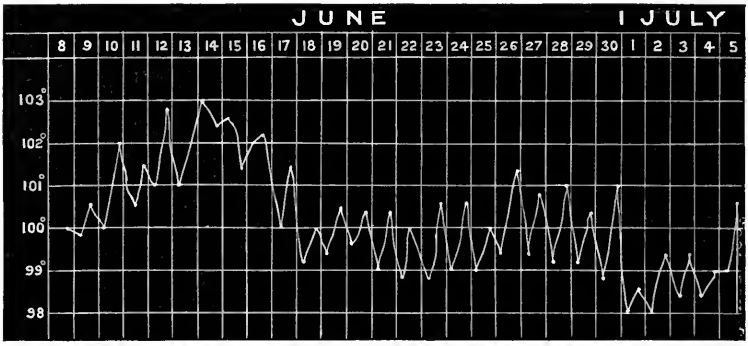
that while making water he felt himself violently struck across the chest and shoulders, became enveloped in blinding light, and was hurled into the air, coming down upon his back 'all of a crash,' and *never losing consciousness.* I was at the Hospital waiting his arrival; he was then very deaf, and seemed almost stupidly quiet and tranquil, complaining of a little pain in each leg, one as much as the other, but greatly of the universal sensation of heat—burning, fiery heat. He smelt just like the victim of a gun accident.

His eyebrows were burnt off, his whiskers and beard much scorched; the chest was covered with multiple coarsely dendritic superficial burns, the cuticle being in many places abraded; on the abdomen were deeper and more extensive burns, particularly about the centre, and many crimson and purple burns were found over the sides and back. A deep burn was situated at the top of the right thigh and pubic region. Down each thigh and leg there was a broad streaming burn, some 3 inches wide, passing round the inner side of the knee, and terminating below the left inner ankle in a burn and excoriation. In the right foot was a ragged lacerated wound of the heel, through which could be felt the comminuted os calcis. From this stream numerous burns branched on either leg in all directions. The bones of the right leg were broken, and the tibia protruded through the skin *in the stream* about one-third of its length above the ankle. At the wound and from thence to the gaping heel all was much charred and blackened. The stream (as I call it) was indurated throughout its entire length, and of a crimson colour.

The fracture was easily reduced, and the leg put upon an iron back-splint, with footpiece, and slung. The fixing of the foot was, on account of the state of the heel, unsatisfactory. The hæmorrhage from the wound in the leg was stayed by a sponge compress, the heel was poulticed, and the burns dressed with carron oil. Milk was ordered as the exclusive diet, and Morph. Hydrochlor. $\frac{1}{3}$ grain administered. P. 76, full and regular; T. 100°; respiration normal. The next morning (and for two weeks longer) the man continued deaf, but he displayed a remarkable cheerfulness and calmness.

For the first six days his progress was excellent, but on the morning of the seventh the patient seemed not nearly so well; pulse rapid, temperature high; and he was drowsy and depressed. The small quantity of brandy already ordered was

therefore doubled. On the following day the eschars began to separate, and the man rallied. From this point his recovery was uninterrupted as regards the burns and general health; but, owing to the state of the heel and the large slough which formed about the wound in the leg, the fracture was very troublesome to manage, the end of the tibia being often visible; still on September 16 (just ten weeks after the storm) the man walked a few steps, his leg having been taken off the splint and put on a pillow some three weeks before. On December 3 a small scale of bone came away through a sinus in the site of the old wound.



The burns were well in four weeks, *the tibia* and fibula in ten weeks; but *the heel* was repaired so slowly that it was twenty weeks before the man could be discharged. The leg is shortened by $\frac{5}{8}$ inch.

With regard to the electric phenomena noted:—

1. The *almost* complete immunity of the nervous system.

2. That the course of the fluid appeared to have been from above downwards.

3. That the clothes being very wet, their conductivity was augmented.

4. Where the flannel touched the skin the burns were superficial, where the cotton trousers were in contact with the surface of the body the burns were uniformly deeper.

5. Wherever there was a piece of metal (*e.g.* waist-belt, watch, boots) there was an explosion, or at least a greater development of heat.

6. The man was aware that the heel of his right foot was habitually raised from the ground during micturition.

The saturated clothing formed a better conductor than the great nerve-trunks, and so, I suppose, saved the man's life.

VII.—*A Case of Cancer of the Breast, following long standing Eczema of the Nipple.* By George Lawson. *Read October* 24, 1879.

MRS. P., æt. 51, came under my care in July of this year on account of enlargement and hardness of the right breast, associated with a large eczematous patch, which included the nipple and an area of skin of rather more than an inch round it. For the history of the case I am indebted to Dr. T. C. Fox, who gave me the following notes from the case-book of his brother, the late Dr. Tilbury Fox:—

In July 1878 the patient consulted Dr. Tilbury Fox for a very chronic eczema, apparently of an ordinary nature, around the nipple, which was slightly retracted, and the breast was perhaps of rather increased consistence. She was in very fair health and quite regular. She was in the habit of driving a pair of ponies a good deal. There was no pain, but great irritation. She had been under the treatment of four different physicians before she had seen Dr. Fox, and multitudes of remedies had been applied, of soothing, stimulant, and alterative character, also a drying powder. These had relieved but never cured her. Arsenic had also been largely given. The patient's mother died of scirrhus. At this time I was asked by Dr. Fox to examine the breast, to ascertain if there were any indications of cancer. I did so, and, with the exception of a slight retraction of the nipple, the breast appeared normal. It was perhaps of a firmer consistence than the other. The skin was freely moveable over the whole breast, and the breast upon the muscle. There was no enlargement of the glands in the axilla. From this time I did not see the patient until the middle of July of this year, when I was struck with the great change which had taken place. The breast was more large and hard, with the nipple much withdrawn and the skin around the nipple adherent to the parts below. There was also an enlarged

gland in the axilla. It was evident that the breast was infiltrated with scirrhus. On the following day Sir James Paget saw the patient with me, and concurred in the advice that the breast should be removed. I accordingly excised the breast, and took away also the enlarged gland in the axilla. A portion of the tumour and of the eczematous patch was examined by Dr. Thin, and he has kindly given me the annexed report. I may add that the wound healed rapidly, and at the end of four weeks the patient was able to return to her home in the country. I saw her a fortnight since, and there was a healthy cicatrix, and no indication of recurrence.

July 24, 1880.—The patient still continues well. No recurrence.

Remarks.—One of the surgical questions of the day is whether we may consider intractable eczema of the nipple the precursor of scirrhus of the breast. The cases related by Sir James Paget and Mr. Butlin have established the fact that scirrhus of the breast frequently follows a condition of the skin which closely resembles eczema in its general characters. There is some doubt as to whether this so-called eczema is indeed true eczema; whether it is not rather a new growth, with some of the superficial characters of eczema, but which differs from it in its microscopical structure.

The specimen which I show to-night was taken from a patient who had suffered for over four years from what had been recognized and treated as eczema of the nipple. The disease had resisted all treatment, and had only been partially ameliorated by the applications made to it, and by the medicine she had taken. She had been for eight months under the care of the late Dr. Tilbury Fox, and for three years previously under the treatment of four other physicians. That the breast might become the seat of scirrhus was anticipated, and it was frequently examined by Dr. Fox and once by myself, in July 1878, to see if there were any indications of cancer, but none were found. I next saw the patient after an interval of twelve months, and scirrhus of the breast was well-marked.

The important and practical question is whether, in cases of eczema of the nipple which has resisted for a length of time all treatment, we are not justified in advising that the breast should be removed, in anticipation of a disease which does not then exist.

In one case I removed the greater portion of a tongue,

because the gentleman had suffered from ichthyosis of that organ for eighteen years, and I had found that all the recorded cases of ichthyosis of the tongue had terminated in cancer either before or shortly after the disease had reached that age. The operation was performed nearly four years ago, and the patient still continues well.

I have also frequently excised an eye which had received a dangerous wound, in anticipation of sympathetic ophthalmia occurring in the sound eye, feeling that it was better to save one eye than to run the risk of losing both. The same principle of treatment may be fairly applied to cases of intractable eczema of the nipple, if one can thoroughly establish the fact that in the majority of such cases the disease is followed by cancer.

Dr. Thin's report of his Microscopical Examination of the specimen.

The diseased skin in Mr. Lawson's case was sharply limited towards the healthy skin by a groove in the epidermis. The cellular elements of the epidermis and the papillary layer of the cutis were the seat of changes that may be shortly described as the results of a chronic destructive inflammation. The *pars reticularis corii* was not affected.

Only a part of the nipple was examined. On its surface there were still epidermic elements to be found, but they were considerably broken up. The connective-tissue was infiltrated with columns of epithelial * (or cancer) cells. The small part examined did not contain the diseased lactiferous ducts, which experience of similar cases suggests are to be found in the nipple.

The tumour of the mamma was a well-marked example of epithelial cancer in full development. The axillary gland was also infiltrated with cancer elements.

* The form of cancer described by Waldeyer under the name of Fibro-carcinoma cysticum mammæ.

VIII.—*A Case of Congenital Sebaceous Disease of the Head and Neck.* By H. Radcliffe Crocker, M.D. *Read November* 14, 1879.

THOMAS A., æt. six weeks, was brought to University College Hospital on Sept. 30, 1879, with a lesion of the skin of the head and neck distributed in patches as follows:—On the right side of the face, in front of the ear, was an irregular patch, 3 in. by $1\frac{1}{2}$ in., reaching $1\frac{1}{4}$ in. above and $1\frac{1}{4}$ in. below the ear; this joined by a narrow process a large patch $1\frac{1}{4}$ in. broad which goes across the front of the neck to the other side, sending a process up to the left ear and involving the lower lobe; processes branch off upwards and downwards, the largest, $\frac{3}{8}$ in. broad, going up to the chin. On the left side above the ear is a roughly triangular patch $1\frac{3}{8}$ in. by $1\frac{1}{4}$ in. On the cheek is an irregular branched patch, on the left ala nasi there are small ones, and at the angle between the nose and eye of the same side is another reaching up to the brow. The largest of all is an irregular patch on the occiput, its greatest diameters being $9\frac{3}{4}$ in. by $2\frac{3}{8}$ in. In the neighbourhood of the larger patches are a few quite small ones, but there are no others in any part of the body or limbs, the skin being quite healthy and the child well nourished, though small for its age. The largest, and some of the others show indications of being composite, there being in places a sulcus, and sometimes a raised edge on each side of the sulcus. The colour of the affected parts is a pale reddish yellow, but the degree of redness varies; thus it is redder when the child cries, and paler after exposure to cold. The surface is very finely granular, consisting of closely aggregated minute pale yellow papules; the whole patch is slightly raised above the surrounding skin and quite hairless; the edge is sharply defined, more raised than the rest, and consists mainly of comedones, with their usual black tops; these also are seen less closely arranged on the borders of some of the sulci which divide the large patches, but a few are seen here and there on the surface of the patches, and occasionally one has become inflamed and has suppurated. The history is that the patches were present at birth, but more raised than now, being at that time about $\frac{1}{12}$ in. thick;

they were red and rough, but there were no distinct pimples, the mother said. The nurse took the child the next day to the Middlesex Hospital. A week after birth little yellow heads appeared on the patch on the neck, which went away in another week. The patches have been gradually fading ever since, being less prominent and paler, but their area has remained unaltered, except the small patch at the inner angle of the orbit, which the mother thinks is a little larger. The child's health has been good from birth, except for frequent vomiting, probably from over-feeding. When I showed the case to the Society, on Oct. 10, there was slight snuffling, but this was not present when the child was first brought to the Hospital, and the mother ascribed it to catarrh from exposure during examination. Mr. Hutchinson detected an odour which to his mind suggested syphilis, but the child is not kept clean, and is constantly vomiting, and there is no corroborative evidence of congenital syphilis. The mother has always had good health, has been married five years, and during this time has never been ill, or even ailing. She has another child, aged three years, which I have seen, and which is perfectly healthy. I have not been able to examine the father, but for the seven years the wife has known him he has not had a day's illness or seemed out of health in any way. In deference to Mr. Hutchinson's opinion I have had Ung. Hydrargyri rubbed into the trunk for a month; I have now stopped it, as the eruption is unaltered, except that there are not so many comedones, and the edge, therefore, is like the surface, though a little more raised. It is to be noted that there are undoubted comedones on the edge and sometimes on the surface; the individual granules of which the patch is mainly made up look not unlike milium on a very small scale and of a reddish tint, and where the comedones have disappeared the edge resembles the general surface, but is a little more raised; the comedones, therefore, are due, I think, to inflammatory enlargement of the component granules, which sometimes go on to suppuration; and if this view be correct, I am right in calling it a congenital sebaceous disease. The case is, however, as far as I have been able to ascertain, a unique one, and I shall be glad to receive suggestions from any who may have seen the patient.

Report on Dr. Radcliffe Crocker's Case of Congenital Disease of the Scalp.

This case was examined by the Sub-Committee on Nov. 20, 1879. They considered the lesion of the skin which formed the subject of inquiry to have been correctly described by the reporter. As regards the general condition of the child, on the buttocks there was at the time of examination a papular and scabbed eruption, which, the mother said, had been present a few days. The slight snuffling noticed when the case was shown at the Society was still present, and the child was emaciating. Subsequently the Committee learned that the vomiting continued, and the child progressively wasted, and died on January 1, 1880, without any further symptoms. Dr. Radcliffe Crocker heard of the death on the second day after its occurrence, and made an external examination of the child. The extent of the lesion on the head and neck had not altered, there was no eruption on the buttocks, and the mother and a friend stated that the eruption seen there by the Committee got well in a few days without treatment. The body was much emaciated. Permission was obtained to remove a portion of the skin of the scalp, and some was taken, so as to include a portion of healthy skin, the margin, and some of the surface of the affected portion. This was hardened in $\frac{1}{6}$ per cent. solution of chromic acid and alcohol, and sections were made. No other examination of the body was permitted.

The Committee arrived at the following conclusions :—

From its clinical aspects they agreed with the reporter—

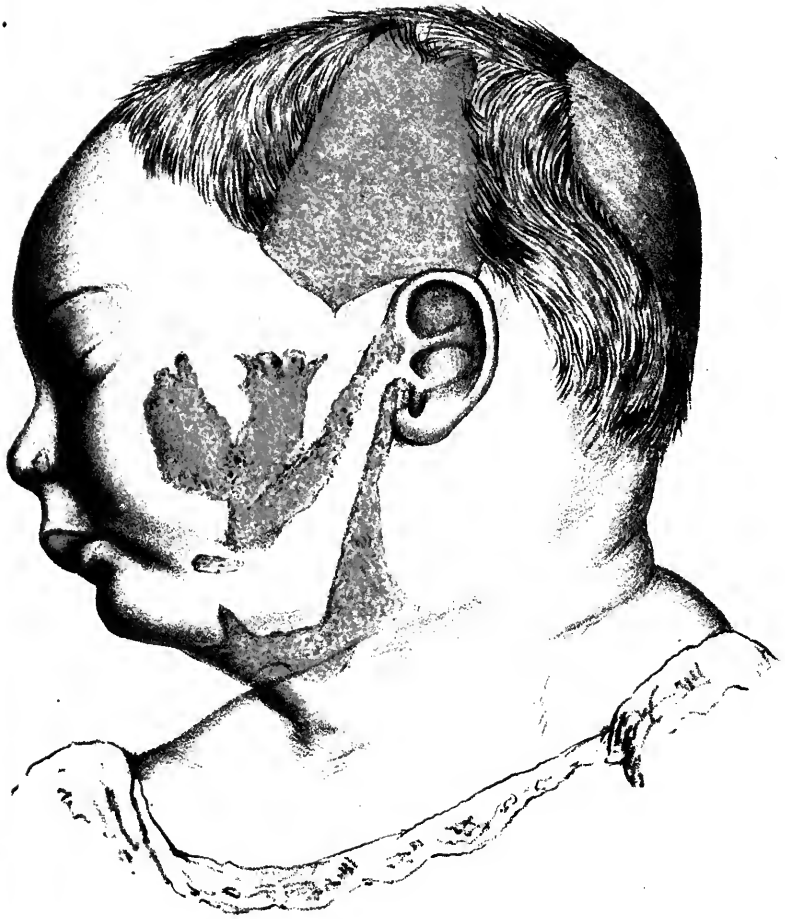
1. That the disease was congenital.

2. That there was no alteration in the extent of the lesion after birth.

3. That the patches became red or pale, more or less prominent, according to the vascularity of the parts depending upon heat, cold, excitement, &c.

4. That some of the sebaceous glands of the affected parts became sometimes distended with secretion (comedo), and subsequently inflamed like an ordinary acne.

They would also add that the snuffling, the eruption on the buttocks, and the progressive wasting were strongly suggestive of congenital syphilis, though no corroborative evidence from the family history was obtainable. The disease, however, did not present any of the features of any known syphilitic lesion.



S. R. Hamilton. del.

Mintern Bros, Chromo-lith.

Dr Crocker's case of Congenital Sebaceous Disease of the Scalp.

Appearances somewhat resembling it, but without the acne element, are occasionally seen in adults in the structures called moles, and possibly, had the patient lived, this would have been classed in the same category.

Microscopic appearances.—The epithelial layers did not show any marked change, but the papillæ were less prominent than in the healthy part. In the corium the fibrous tissue was increased, and bands of it passed between the lobes of the sebaceous glands, separating them sometimes completely, at others incompletely, from the rest of the gland. The glands as a whole were abnormally large.

The hair-follicles were in most cases absent, but occasionally a fragment of one was to be seen. No sweat structures were found. The Committee offer the following explanation:—That an intra-uterine inflammation led to an increase of the fibrous tissue, which by its contraction pressed upon and atrophied the hair-bulbs and sweat glands, and separated the component parts of the sebaceous glands. Whether this was of syphilitic origin or not is a question the Committee cannot form any conclusion upon.

Signed Dyce Duckworth.
Robt. Liveing.
Jonathan Hutchinson.
H. Radcliffe Crocker.

IX.—*A Case of Acute Ophthalmitis affecting both Eyes. Treatment by rapid mercurialization and the instillation of Duboisin.* By W. Spencer Watson. *Read November* 14, 1879.

Elizabeth R., æt. 37 years, a married woman, applied at the South London Ophthalmic Hospital on October 3, 1879, with acute ophthalmitis of the left eye. Four days previously her 'eyes were quite well,' according to her account, but on September 30 she was exposed to the foul emanations from the body of a man who died in the house in which she was living. She seems to have washed some of the linen or dressings removed from an offensive ulcer on the leg of the dead man, and she thinks she may have inoculated her eyes with the discharge. She noticed that her eyes were 'pricking and shooting 'during the washing, and she rubbed them several times with her hand. In the evening she had an

attack of shivering, which lasted over an hour, and on the following day, December 1, her left eye having become much inflamed and watery, the right eye also being irritable, she used some brandy-and-water as a lotion.

On October 3, the day of her admission, the eyelids of her left eye were nearly closed from swelling and inflammation. The conjunctiva and sclerotic were much reddened and congested, and the eyeball so excessively tender that it was impossible to ascertain by the touch whether there was any undue tension. The subconjunctival tissue was swollen, the cornea slightly dull, and the iris and pupil obscured by turbidity of the aqueous. The margin of the pupil was tied down by adhesions to the capsule of the lens, and the pupil remained unaffected by frequent instillations of atropine. There was much photophobia and some serous, *but no purulent*, discharge. Vision of the left eye amounted to the capacity for counting fingers only; with the right eye, which was affected with slight conjunctivitis, the patient could see about as well as ever.

Recognizing the apparent severity of the case, I advised the woman to remain as an in-patient. Domestic affairs, however, compelled her to decline coming into the Hospital. It is, therefore, very doubtful whether she used the belladonna lotion which was ordered, and certainly the leeches were not applied. She probably took her calomel and opium pills (gr. i. and gr. $\frac{1}{4}$) every three hours, and a chloral and bromide of potassium draught at night.

Three days later, October 6, she was led, almost blind, into the out-patient room, and was only too glad to be admitted as an in-patient, her right eye having become acutely inflamed.

On admission a free saline purge was given, Heurteloup's leech was applied to the left temple, mercurial ointment was rubbed into the skin of the armpits, and $\frac{1}{16}$ grain of corrosive sublimate was given internally three times a day. At the same time duboisin was dropped into both eyes. On the following day, the bowels having been freely relieved, but the pupils remaining unaffected by the duboisin, Mr. Pain, my clinical assistant, undertook to superintend the duboisin applications, putting in drops of the four-grains-solution every two hours, and carefully watching for toxic symptoms. He applied two drops to each eye twice in the afternoon of October 6, and again at 8 P.M.

Oct. 7.—One drop put into each eye four times during

the day and two drops into each on another occasion. The gums now began to be tender, and the mercurial ointment was therefore discontinued, though we still gave the corrosive sublimate.

8.—Opaque matter in both anterior chambers; corneæ opaque, the left more so than the right. One drop of duboisin in each eye at 9 A.M., and two in each at 2, 5, and 8 P.M.

9.—Two drops in each five times in the day. Right pupil a little dilated upwards in the evening.

10.—No ill effects of a toxic nature having manifested themselves, the drops were used eight times daily from this date, and were not followed by any constitutional symptoms. In the evening of the 10th the photophobia and swelling of the eyelids had gone. The anterior chambers were clearer. The left pupil was slightly dilated, and the right pupil also, both being irregular in outline. Eyeballs very tender. Body temperature 100·4°, pulse 84.

11.—Pupils larger. Anterior chambers clearer. After a free action of the bowels temperature 98·0°; pulse 80, feeble, and occasionally intermittent.

12.—Anterior chambers clearer. Pupils larger. On ophthalmoscopic examination the pupils appeared dark. R.V.J. 19. L.V. fingers (?). On oblique illumination the lens in each eye appeared turbid.

13.—R.V.J. 16. L.J. 20.

14.—The drops to be used three times a day.

17.—Anterior chambers clearer and pupils larger, though with synechiæ.

20.—Corneæ clearer. On oblique illumination of the left pupil a dense opacity was noticed in the vitreous space. Both lenses turbid. The fundus of each eye had been previously examined by the ophthalmoscope, and only a dull grey reflex had hitherto been obtained. The same appearance was seen in the left eye to-day, but some light was reflected from the upper and inner part of the right fundus, and a greyish mass could be seen lying in the vitreous between the retina and the lens capsule. To-day the patient insisted on leaving the Hospital.

She returned on the 22nd with more ciliary injection and conjunctival inflammation. The duboisin drops have been neglected, and she has very foolishly been exposing her eye to the glare of the fire in cooking.

Being readmitted, the treatment has been resumed.

27.—No toxic effects from the duboisin. Vision is manifestly improving, and there is a distinct reflex from the fundus of the right eye, the pupil of which is much more fully dilated. The ophthalmoscopic view of the left pupil is still dark.

Most of the above notes were taken for me by Mr. Alfred Pain, clinical assistant of the Hospital.

Nov. 14.—I have seen the patient to-day. The right eye has still further improved. There is now no ciliary congestion, and the sight is V=10 J. 14″ S=$\frac{10}{100}$. She says she could see well enough to do needlework. Both anterior chambers are clear.

The left eye has also improved, but there is still some congestion of the ciliary region, and she has muscæ and luminous spectra, which she describes variously as 'little brown insects bobbing about before her eyes,' and as 'flashes of light and balls of light like an eye.' These latter luminous objects are seen by her when in the dark and with her eyes closed. The vitreous of the right eye is still turbid, but allows of a fairly distinct view of the optic disc. In the left eye the ophthalmoscope fails to give more than a dull-red reflex through the irregular pupil. Vision of this eye amounts to 16 J. 12″.

The woman still takes the corrosive sublimate, with bark, and uses the duboisin. Her gums are not tender nor even spongy, and she finds no inconvenience from the use of either medicine or drops.

Remarks.—This case is remarkable as being an instance of acute double ophthalmitis, due neither to injury nor to the infection of purulent discharge, nor to syphilis. The patient totally denied ever having had any syphilitic disease, and though closely questioned there seemed to be no history of her ever having had it. There is a possibility of her having conveyed some septic poison into her eyes from the foul dressings she came into contact with; but the appearance of the conjunctiva when first seen was not like that observed in purulent or gonorrhœal ophthalmia. There was no purulent discharge throughout the case. Nevertheless there was intense pain in the eyeballs and head, with extreme tenderness of touch, so that in this respect the case resembles purulent ophthalmia. On the other hand, the history of a rigor having followed the possible exposure to septic poison and the subsequent febrile symptoms point rather to a blood-poison as the origin of the mischief. The very active treatment by

mercurials and the use of the duboisin have preserved an amount of sight such as was hardly to have been hoped for in the early stages. The very free use of the duboisin without producing any of the toxic effects sometimes observed from a much more sparing use of it is also remarkable.

X.—*A Case of Perforating Wound of the Lung.* By Surgeon-Major Alcock, Army Medical Service. Communicated by C. Theodore Williams, M.D. *Read November* 14, 1879.

On May 8, 1878, the Frontier Light Horse were ordered to dismount and dislodge from a vantage-ground among some overhanging rocks and trees a body of Kaffirs who were doing serious mischief amongst the English attacking force in the Perie Bush. When close to the position, Trooper G., aged 30, fell struck by a rifle bullet in the chest.

He was soon afterwards moved to the 'dressing place,' and later in the day brought down from the heights, on which the English camp was situate, to the field hospital, at the foot, being carried over the more precipitous parts on a stretcher, and finally transferred to an ambulance, accomplishing altogether a distance of $2\frac{1}{2}$ miles. On arrival at the hospital he was in a very exhausted state.

The bullet was found to have entered through the fourth intercostal space on the right side, internal to the nipple, and to have found an exit through the ninth rib, breaking that bone at about an inch and a half from the spinal column. Air, blood, and mucus escaped freely from both wounds, and during the night much blood was expectorated.

A small piece of lint soaked in carbolic oil was applied over each opening and covered by a quantity of loose freshly picked oakum, held on by a bandage, so that it acted as a respirator and disinfectant over the wound. This was changed night and morning, the parts being carefully washed with a solution of Condy's fluid at the time. Chloral and morphia were used as a sedative.

During the first two days there was much distress from the frequency of cough and bloody expectoration.

On the third day his night temperature was but 100·2°, and he was getting rapidly easier. From this date he was

never in serious distress, except during one forenoon upon which I had inadvertently applied the bandage too tightly, thereby converting the permeable pad into an impenetrable compress, and thus confining the copious secretion within the lung.

On my return from a distant camp in the afternoon I loosened the dressing, and he was quickly at ease.

During the treatment he occupied, with two or three other patients, a small room, the door of which opened directly into the verandah, and the window of which had to be opened about an inch or more at night for ventilation. The climate exceeded at midday the warmth of an English July, but often sank at night to a white frost.

In one month from the date of the injury both wounds were healed, and the man was out in the garden of the hospital. The lung was thickened along the track of the bullet, and the lower third of the posterior lobe was dull on percussion. This man was awarded a pension some time afterwards, and went to a distant part of the colony.

XI.—*Removal of the Frontal Portion of the Frontal Bone, the Roofs of both Orbits, the Ethmoid Bone, parts of both Superior Maxillæ, the Vomer, and Palate, the left greater wing of the Sphenoid Bone, and the left Eyeball: followed by complete restoration to health.* By A. F. Norton. *Read November* 14, 1879.

THE subject of the paper contracted syphilis in June 1866. He is of a strumous constitution, having suffered previously from strumous psoriasis, and since that time from strumous arthritis of the left knee-joint. He was treated for the chancre (by Lee and Noverre) by mercurial inunctions and mercurial vapour baths, and subsequently by iodide of potassium and sarsaparilla. The chancre healed in about five weeks, but was followed by an eruption of small vesicles and sores on the glans penis every two or three months. The patient never had sore throat nor any cutaneous eruption whatever.

The winter of 1866 he spent in India, but his habits were not altogether temperate, and towards the following autumn syphilitic ulceration attacked the matrix of the toenails on both feet.

In 1868 arthritis first appeared in the left knee-joint, but the disease seems to have been throughout of the strumous variety and not bearing upon the case under consideration. The joint after five years became anchylosed, and at the present time gives no trouble beyond the inconvenience of the deformity, the knee being fixed, and about 17 inches in circumference.

Throughout this time the patient was careless in his mode of living with regard to the use of stimulants and exposure to changes of temperature, and at Christmas of 1873 he was attacked with inflammation of the larynx.

In 1875 a suppurative discharge flowed from the nostrils, followed by necrosis of the bones of the nose and of the left palate and superior maxilla. From time to time pieces of bone were removed by medical men, and in June 1876 he came under my care. At this time the ethmoid bone was necrosing, and a node occupied nearly all the frontal portion of the frontal bone. I prohibited all stimulants, of which he had hitherto been taking a large quantity, and stopped the iodide of potassium, giving quinine and iron and opium, with milk and simple diet; and I made a point of not allowing him to undergo any change of temperature. In October the sense of sight in the left eye was destroyed; and with a probe and my finger in the roof of the pharynx I detected that the left great wing of the sphenoid bone was loose; and as there was space to remove it through the nose, owing to absence of the septum and of a part of the maxilla, I adopted that plan of getting rid of this large mass of bone. After this time I never allowed the patient to leave the house, but kept him in an unchanging temperature of 62° while the frontal bone was separating from its attachments.

On Feb. 4, 1878, I considered the bones in a fit state to be removed, and I operated in the following manner:— An incision was made perpendicularly upwards from the nose to the sagittal suture, and from each end of this central incision lateral incisions were carried outwards, in the upper part along the coronal suture, and in the lower part along the orbital ridges of the frontal bone. The flaps thus formed were turned outwards, exposing all the frontal bone. Gentle traction and manipulation brought away the frontal portion of the frontal bone as far as the temporal ridges, the cribriform portion of the ethmoid, and the roofs of both orbits as far as the external angular processes. The left eye was in a state of chronic suppurative inflammation, and the sight

lost, so I removed it. The skin over the forehead was replaced. From this time the history of the case terminates. All disagreeable odour ceased, granulations rapidly sprang up, and the parts healed.

Some trouble was for a time caused by inability to raise the right eyelid, which remained swelled, and prevented its use, but ultimately the swelling subsided and the lid can be raised to a sufficient extent for the purposes of sight.

I need make but few remarks further upon the case. It is, I think, astonishing that health could have been maintained under the prolonged and exhausting suppuration which occurred during the separation of this extraordinary quantity of bone; especially do I think so, recalling the fact that all pus formed was horribly fœtid, notwithstanding every attempt to disinfect it, and that throughout the disease large quantities of this fœtid pus discharged into the nose, and thence found a way into the stomach, by continually stimulating efforts at deglutition.

Further, I am not a little surprised that the brain should be in no way affected, when I consider that not less than its entire anterior third was for a long time supported and covered in by cicatricial tissue only.

Lastly, as to treatment, I have avoided syphilitic treatment and all stimulants from the time he came under my care. My object has been to maintain a desire for food; and looking upon a patient suffering from syphilitic disease as one predisposed in the extreme to the chronic forms of inflammation, I have, by studying to avoid all changes of temperature, altogether withdrawn him from the influence of the most commonly exciting cause of inflammation. The patient is still strictly careful not to expose himself to cold, nor, indeed, to any change of temperature, and no inflammation of any part has occurred since the operation. In fact, we may, I think, say that he is completely restored to health.

The patient was exhibited. He had not been seen by Mr. Norton for nearly a year, and in the meantime some bone had formed in parts over the frontal region. An examination of the bones removed by the operation showed that the whole thickness of the skull had been taken away; and Mr. Norton stated that though as a rule bone was not replaced in the skull after removal in cases of syphilis, yet in the present instance there was reason to expect some new bony formation. He said that generally the periosteum was destroyed in

syphilitic necrosis of the skull, but in the case under consideration the necrosis had commenced by formation of a large node, and the periosteum had been separated from the bone still retaining its vitality.

XII.—*A Case of unusual Development of Keloid in Smallpox Scars.* By James F. Goodhart, M.D. *Read November* 14, 1879.

THE patient is 16½ years of age. He has never been vaccinated, and in March last he had smallpox. The disease was very severe, and bedsores formed on his shoulders, elbows, hips, and back. He was in bed four months, and during that time the keloid appeared. All the tumours came about the same time, and since then have been decreasing.

The face, neck, shoulders, upper extremities, and legs are the parts upon which the disease is most abundant. On the thighs it attacks the seat of old bedsores, and over each great trochanter and the sacrum there is a large mass of keloid in a scar. The appearances of the disease vary somewhat in different parts. Upon the face—where, perhaps, the greatest exuberance of growth is shown—there are large flattened masses of solid growth, occupying chiefly the inferior maxillary region, though by no means confined to it. The skin of the face is more or less trabeculated all over by an irregular growth of raised thick fleshy bands and cords, giving the features an expression similar to that common in cases of elephantiasis. They in great part surround the mouth and prevent its full opening, and from the inside they can be felt as thick hard masses close down to the mucous membrane, and by pressure from the inside the circulation in the skin is easily controlled, and the rosy tint of the surface changed to an opaque yellow. The cuticle is red, traversed by small capillary vessels, smooth and shiny. The mucous membrane of the hard palate is affected also. A raised red cicatricial band runs across on the left side from left to right, and from behind forwards.

The sacral and trochanteric regions show masses of keloid like those upon the face, but the entire scar is less completely affected, and the skin is much deeper in colour, or rather altered, being of a dark purplish-brown, like a recently healed wound; and, from the ill-defined outline of the

disease in these parts, the shrivelled appearance, and the depth of the pigmentation, I believe that the disease is disappearing; and the patient and his father both say they are positive the growths are less in size.

On the arms and forearms, except over each olecranon, where there has been a bedsore, the keloid lumps are mostly circular and discrete, though numerous; and the same may be said of the legs. Over each olecranon there are larger masses, livid red and shrivelled, like those upon each trochanter and upon the sacrum.

On both arms and legs the lumps are mostly about half an inch in diameter, of deep livid brown colour, smooth surface, and indurated like an infiltrated scar. They are mostly situated on the outer aspect of the arm and forearm, on the back of the hand, and over the front and outer part of the legs. Some of the lumps show the usual spur-like edges, which project into the surrounding skin, and on some a few fine silky hairs are to be seen at the edges. Sensation is blunted over the patches, but still fairly perfect, with one or two exceptions. He experiences a slight itching in them, with an occasional feeling of heat. There is no pain, not even a sense of aching.

Some of the masses upon both legs and forearms are certainly disappearing, leaving a soft glossy slightly depressed brown cicatrix. The parts which are unaffected with keloid —mostly the lower parts of the trunk—are thickly covered with the pits of smallpox vesicles, which give to the skin a soft leathery appearance and texture. There is no evidence of any keloid change in these parts, although they are distinctly raised.

There is no history of tumours in the family so far as the patient himself and his father can tell.

The case was brought before the Society for these reasons:—

1. Because it seems to me to be a very unusual extent of development of keloid.

2. I wished to hear from the members of the Society whether they think I am justified in holding out, as I am doing, a hope to the patient that the keloid will ultimately all disappear.

3. That the patient may be again exhibited in some months' time, to illustrate the progress of the spontaneous involution which the disease is making.

Note.—Since the exhibition of the case my friend Mr.

Bingham, a former pupil at Guy's Hospital, has told me of a case of keloid occurring in smallpox scars which he has seen. It occurred in a girl of about seven years of age, in the Hampstead Smallpox Hospital. He cannot, unfortunately, give me further notes of it. I may also say that I have seen more than once—although, amongst a large number of out-patient notes, I have as yet been unable to put my hand upon the facts—the development of keloid in the vaccination scars of infants of a few months old. One case particularly comes to my mind, in which four or five good pocks all developed a mass of keloid. I have also quite recently seen keloid masses developed in two pocks of a secondary vaccination in a youth aged nineteen.

With regard to the patient brought before the Society it should be stated that he has been under close observation ever since; and by carefully mapping out the various nodules as they existed upon his arms and legs, and describing them, I have satisfied myself that they are slowly changing.

Thus I take two out of several notes:—

Feb. 19, 1880.—*The left leg.*—Most of the indurations appear to be flatter than they were; but with regard to I (a patch so denominated in a former note) the indurations then present have now completely disappeared. The others, having still indurated centres, I cannot speak to more definitely.

In the right leg no certain differences are to be detected, but they all look less raised, and perhaps E″ in E′ (a raised part of the large patch E′) is less perceptible than it was.

April 3.—*Left leg.*—My general impression is that all the indurations are flatter than they were. On careful comparison with former note:—

In B the slight induration is now only doubtfully appreciable. Its site is still evident by a darker staining in the centre of a paler cicatrix, and this makes me think that an induration can be felt, but it is doubtful.

F and H patches are, I think, flatter, but still correspond with the former description.

G patch has lost the induration, or very nearly so, in its inner half.

I patches are now hardly appreciable as indurations; indeed, the sound skin separating the islands is indurated by comparison.

The lower patch of two on the inner side is only just appreciable, and the upper seems to me flatter.

Right leg.—A (large patch) looks a little raised still, but

its material is now softer, so that on passing the finger over it, the induration is at best but doubtful. It is more evident when it is pinched up and the skin is made taut. Small A (an induration in the centre of A) is still distinct, but there is now a soft depressed scar round it.

A′ has a little, not very evident, induration in part of it still. Both A and A′ are, I think, less.

B, induration just appreciable when pinched up—not otherwise.

B′ and C remain, and still correspond with description.

General Note.—The patches are, I think, altering somewhat in shape by shrinking and by a variation in colour—as it is not easy to recognise and identify all the patches from their previous description.

Left arm.—I think it must be said that there is no difference.

Right arm.—B′ is now a perfectly unindurated pale cicatrix. The remainder are *in statu quo.*

The masses on the face are also slowly changing, and, as in the limbs, the lumps are developing a brown pigmentation coincident with gradual flattening.

The patient had an attack of herpes zoster on the left side of the trunk, below the nipple, on February 11. The scars resulting from this show no tendency up to the present date (June) to develop keloid.

XIII.—*Report of the Committee nominated by the President of the Clinical Society 'to report on Dr. Goodhart's case of Keloid Growth following Smallpox; also to inquire into the differences that are supposed to exist between the various forms of Keloid, with special reference to the Keloid said to be peculiar to Syphilis.'*

UPON the first head your Committee are of opinion that the case exhibited to the Society is correctly designated as keloid. It has all the characteristic features of keloid—the rosy glossy surface covered with small congested capillaries; the firm texture rising abruptly and considerably above the surrounding skin and the spur-like ridges from its margins. The wide distribution of the disease, and the exuberance of its growth upon the face and the extremities,

W. Hurst del.

Mintern Bros. Chromo-lith.

Dr Goodhart's case of Keloid in Smallpox Scars.

conspire to make the case one of much rarity. But the main point with reference to it is the question whether or not the tumours are undergoing a process of spontaneous involution. Your Committee, feeling that the disappearance of keloid tumours is of considerable importance, not only in relation to the life history of such growths, but also to that of other tumours, and that the phenomenon requires further well-authenticated facts and observations to support it, has given its careful attention to the case. The patient has been submitted to two examinations by all the members of your Committee, with an interval of about five months between the two; and in the meantime the lad has been closely watched by Dr. Goodhart, the reporter of the case, and all the chief seats of the disease have been mapped out and their condition described from time to time. As the result of these varied observations we are unanimously of opinion that the keloid growths are all slowly changing; some, the larger ones on the face and extremities, are flattening down, and, therefore, are less prominent than they were; some have altogether gone. And there is, we think, no room for doubt that the patient and his father are right when they assert that many of the scars now present were raised and indurated at a former period. The scars thus indicated by them are similar to others in which we have ourselves observed the masses to have disappeared; and these scars present some what unusual appearances, being for the most part sharply defined, livid in colour, or brownish—all depressed and unusually soft and glossy.

In passing to the second part of the duty imposed upon us—viz., to inquire into the differences that are supposed to exist between the various forms of keloid with especial reference to the keloid said to be peculiar to syphilis—your Committee drew up a series of questions for the guidance of its members, which embrace all the points which were in dispute when the subject was under discussion, and some others which, though not under discussion, did not seem to be definitely settled. They are as follows:—

1. Does keloid ever occur except in scars?

2. Are there any differences between keloid commencing spontaneously and the keloid of scars?

3. When keloid occurs in syphilitic scars does it present any special characteristics?

4. Is there any evidence forthcoming as to the duration of keloid, and as to its disappearance?

5. Is keloid associated with pain or any other characteristic sensation?

6. When keloid is multiple do all the patches appear simultaneously or in crops?

7. In patients the subjects of keloid can any evidence of personal or family tendency to morbid growth be obtained?

8. The ages of patients affected with keloid?

The answers to these questions have been framed in part upon the experience of some of the best known writers upon the subject, and in part—though by no means so fully as might be wished—upon the hitherto unrecorded experience of some of those whose practice has afforded exceptional advantages for the observation of keloid. We venture to think that, so far as such questions are capable of receiving definite answers, material for their solution is ready to hand.

But, to take the questions *seriatim*:—

1. Does keloid occur except in scars?

The facts which seem to favour the spontaneous origin of keloid are these:—

a. Some cases of keloid are said to have been congenital. Mr. Bryant gives us notes of the following case:—'A boy aged 10 had a keloid tumour the size of a nut in the centre of the forehead. It had existed at birth. It was then small, and had grown steadily since. It was excised, and the boy was afterwards lost sight of.'

The same gentleman also supplies us with notes of a case in which the disease appeared within the first year of life, and in which there was no history of any burn, abscess, or scar of any kind. The keloid grew over the upper part of the sternum, and it had existed more than a year and a half.

There is also a model in Guy's Hospital Museum (469)* of the face of an infant affected with a disease the nature of which though undoubtedly open to some question, is more like keloid than anything else. The child was twelve months old, and the affection of the face existed at birth.

But a somewhat similar affection began in other parts of the body afterwards (models 467, 468), upon which blisters formed and sores, which were long in healing; so that Dr. Hilton Fagge is disposed to think 'that the affection should be regarded simply as the result of common inflammation of the skin and subcutaneous tissue, leading to bullæ and ulceration; and that the tumours on the face were due to

* Catalogue of the Museum of Guy's Hospital (skin models).

the formation of keloid growth (false keloid of Alibert) in the cicatrices left by some of the patches which had existed in intra-uterine life.'

β. Langhans * and Warren, Jun., † have each examined and recorded the microscopical appearances of a case of spontaneous keloid. The tumour in Warren's case was removed by Kaposi from a patient of Hebra's clinique, and therefore came into the hands of observers well alive to the point in question, and well calculated by experience to pronounce an opinion. According to these authors there is no essential difference in the keloid tumour itself; but while in the cicatricial keloid ‡ the normal skin is replaced altogether by the new growth, in the spontaneous keloid the keloid is situated in the tissue of the corium in such a way that a distinct layer of normal corium tissue can be made out superficial to and beneath the growth. Upon this ground chiefly Kaposi concludes that keloid may occur in a characteristic form (*a*) in an otherwise unaltered corium, having a normal papillary layer, as spontaneous or idiopathic keloid; or (*b*) it may be developed beneath and round about a scar as cicatricial or consecutive keloid.§

γ. As an argument that must count for something it must be mentioned that, from Alibert downwards, observers too numerous to mention have come to the conclusion that there are two kinds of keloid, one spontaneous and the other cicatricial; and, as in some way supporting this contention, there are many recorded cases where the exciting cause has apparently been of a trivial nature, such, for instance, as the application of a blister.

δ. The tendency which is said to exist for keloid to grow in particular races—more particularly in coloured races (Duhring)—also points to a spontaneous origin. Its occurrence in many parts of the body at once tells similarly, and the occasional occurrence of the disease in more than one member of the same family, as mentioned by Wilson, Hebra, and Bryant.

These facts at first sight constitute a strong body of evidence in favour of the existence of a spontaneous keloid; but if we come to analyze them we shall find that of two

* Virchow's *Archives*, Band viii. p. 535.

† *Sitzungsbericht der k. Akademie der Wissensch.*, 1868.

‡ Duhring agrees with this. He says cicatricial keloid is microscopically identical with spontaneous keloid.

§ Hebra, *On Diseases of the Skin*, vol. iii. p. 288. New Syd. Soc.

groups into which they resolve themselves the one, though trustworthy as evidence, so far as it goes, is so feebly represented that it cannot be relied upon; and the other admits of very strong counter-arguments. Upon the first head we would say that if a congenital origin could be proved in any large number of cases, or if the disease frequently appeared in several members of one family, then the probability of a spontaneous origin would be put upon a strong basis. But it is not so. There is only one recorded case of congenital keloid tumour, of which we have cognisance, which does not raise some doubts; and it is, therefore, but prudent to accept this one case with caution; more especially as Fagge's suggestion with regard to another congenital case opens up a somewhat wide field for the possible production of cicatricial keloid even *in utero*.

A family tendency to keloid would, perhaps, be stronger evidence, but even this would not exclude the frequent or constant occurrence of a local injury as an immediately exciting cause.

We come next to the cases of Langhans and Warren, cases of spontaneous keloid in which the tumour was situated in the tissue of the corium in such a way that a distinct layer of normal corium tissue was made out superficial to and beneath the growth. It would seem that under such circumstances there could be no scar in the usual acceptation of that term, since the papillary layer of the skin was normal. And yet, on the other hand, before accepting these as cases of true spontaneous keloid, it must be well considered that keloid undoubtedly occurs in scars so minute as to make the question one of extreme difficulty. Keloid is known to occur after leech-bites, the cicatrices of zoster, in many negroes after punctures, scratches, or cuts—even after contusions and stripes with the lash. In all or any of these it must be very difficult, one would think next to impossible, to determine with certainty whether a scar had or had not preceded the disease. It is, however, open to doubt whether the injury to the skin has in all cases been so slight as was imagined.

Moreover, to say that in spontaneous keloid the skin over the disease is unaffected, is, in many, indeed in the great majority of cases of so-called spontaneous keloid, obviously inconsistent with the fact. There can be no doubt whatever that the appearances of the large majority of cases of spontaneous keloid—if there be such a disease—are identical with those of the greater number of cases of cicatricial keloid;

and that in both the skin is entirely replaced by the new growth.

It is, further, not unimportant to note that in any case there is the same tendency to recurrence after removal.

From a consideration of all these facts your Committee are of opinion that there is plain evidence that the great majority of cases of keloid met with clinically originate in scars. Those cases recorded as spontaneous cannot be disproved, but it is possible that some of them, like other recorded cases, may have originated in minute scars, and they would, therefore, propose to consider it as a disease of scar tissue, and to discard altogether such terms as 'true' and 'false' keloid. They are, however, of opinion that it is possible that there are growths which may morphologically be allied to keloid, and which are more deeply placed.

Question 2—are there any differences between keloid commencing spontaneously and that of scars?—has been necessarily dealt with under question 1. It may be of interest, however, to note in the history of the subject that by those who believe in the mere identity of the two forms true keloid has been thought to be more painful than the cicatricial—to be more frequent in women than in men—and to be more generally situated upon the sternum and shoulders.

3. When keloid occurs in syphilitic scars does it present any special characteristics?—Upon this point very little evidence is accessible to us. Wilks, Westphal, and Bennett have recorded cases of syphilitic keloid; but it would appear—in Dr. Wilks's case certainly—that the disease presented quite the ordinary features of keloid. Dr. Fagge mentions a similar case; and in the 'St. Bartholomew's Hospital Reports,' vol. ix., 1873, p. 117, is a case of cicatrix keloid following dermato-syphilis. The patches were pink, and raised nearly a quarter of an inch from the surrounding surface—a case, in fact, of ordinary keloid. Mr. Hutchinson says: 'Keloid is very common in syphilitic scars—those of rupia, for example. I think it rarely develops to the same perfection, as regards thickness, hardness, and well-circumscribed margins, as is observed in other forms, and it occasionally ulcerates afresh. I do not think I ever saw keloid in a syphilitic scar encroach upon the healthy skin. Nor does it present the dense spur-like projections which are seen in the best marked examples of the malady.'

Mr. Bryant states that keloid growths in syphilitic scars are darker in tint than others. Dr. Liveing has seen dis-

tinct spurs in one case of keloid in syphilitic scars. But he agrees with Mr. Hutchinson in thinking that in general the disease is less well pronounced when it occurs in the syphilitic.

4. Is there any evidence as to the duration of keloid?—All writers seem to concur in the existence of keloid, either without alteration or with slow increase, during a series of years. Kaposi states that, as a rule, it remains unaltered for the remainder of the patient's life when it has once attained a certain degree of development. Duhring states that involution is rare. On the other hand, Alibert in his original treatise mentions the occasional spontaneous disappearance of the keloid. Hebra also mentions a case; and Fagge states that when left alone keloid tumours not unfrequently slowly disappear. The case which gave origin to this investigation is a remarkable instance of this. There are also cases on record where the duration of the disease is known. Dr. Dyce Duckworth has recorded one in vol. iii. of our 'Transactions,' 1870,* where the disease had lasted thirty-six years. Wilson has seen a case lasting twenty years. Dr. Duckworth has another case in which the disease occurred in the site of a blister applied for pericarditis in a man aged about 40. Its growth began in the course of nine months, and now, nine years later, it is slowly disappearing. There is also a case of the late Mr. Callender's where the disease began in a sailor about 36 years of age, and grew for ten years, when the patient was lost sight of.†

Mr. Simon, in some remarks on cancer at the Pathological Society, mentioned a case of a lady ('Trans. Path. Soc.,' vol. xxv. p. 306). 'I remember,' he says, 'to have removed, a great many years ago, from the top of a lady's chest a little fibroid tumour. She had had the disease removed before, but it had come back again; and now in removing it I went widely into the surrounding parts and brought the edges together with three harelip pins. A few weeks afterwards I found that the tumour was growing again, and that in addition each of the six pinholes was giving rise to a little fibroid growth of its own. Eventually the growths all shrank under the use of ice, and the lady (now approaching midlife) has had no subsequent inconvenience.' It cannot be doubted that keloid, though not named, is here described.

* P. 118. This patient died three or four years subsequently, and thus the affection may be said to have lasted for forty years.

† 'St. Barth. Hosp. Reports,' vol. viii. 1872, p. 45.

Mr. Golding-Bird has watched a case from its outset to its disappearance. The keloid succeeded a boil, and, continuing to grow for a year, was raised as much as a third of an inch from the shoulder, and was as large as a split hazel-nut; while at the present time (three years after) the skin presents only a white scar.

Mr. Arthur Barker thus records for us the occurrence of keloid in his own person:—'Early in 1871, while working amongst the wounded of the war in Germany, I cut out of my left arm, a few inches above the elbow, two small portions of skin about the size of half a full-grown pea, involving the whole depth of the cutis vera. The wounds bled freely, and were dressed simply with dry lint, healing slowly. The general sanitary conditions were not of the best—an outbreak of hospital gangrene was just subsiding. The scars always tingled or itched slightly, and began to enlarge within a year or so. They became raised and hardened and of a deep pink colour. The surface of the skin around was white and slightly wrinkled. The volume of the scars reached to about that of a couple of small beans, *i.e.* a great deal larger than the portions removed. They were largest about two years ago (*i.e.* six or seven years after their first appearance), and since then they have slowly dwindled down. They are still, however, raised above the surface, hard, and of a purplish colour, and have a peculiar itching sensation in them at times. The latter was, I think, first noticed in the summer of 1871. Some other small pieces of skin were removed from the forearm of the same side a few weeks later than the first, but not the whole depth of the cutis, as before. The scars from these have shown no trace of secondary change.'

Mr. Hutchinson summarises his experience thus: 'The duration of keloid depends greatly upon the age of the patient. In young patients it usually disappears quickly—sometimes within a year or two of its appearance; in middle-aged and elderly people it disappears much more slowly, or not at all. The harder the growth the less is the tendency for it to disappear; and this characteristic is seldom met with in young subjects or in syphilitic scars. All keloid tends to disappear, and perhaps the many seeming exceptions to this are persons who have died before the process is complete.'

Lastly, a case has been observed by Erasmus Wilson in which the keloid tumour varied in size according to the health of the patient. The tumour had grown gradually for two years, was stationary for the next five, and then slowly dimi-

nished for fifteen months. It was in this last stage that the variation in size was noticed to occur. In fact, the cases of spontaneous disappearance of keloid known to the Committee seem to them to justify the opinion that spontaneous involution is much more common than the published records of such cases would lead one to believe. But the time occupied in its involution would seem to be very variable for individual cases.

5. Is keloid associated with pain or any other characteristic sensation?—Keloid tumours are usually associated with itching, pricking, or stinging. But these sensations are by no means a constant feature. Occasionally only are they painful. Those giving rise to most pain have more frequently been observed to be situated over the sternum than elsewhere.

6. When keloid is multiple do all the patches appear simultaneously or in crops?—The Committee are in possession of notes of a few cases in which the eruption appeared all at once, and, except in cases in which the scars form at different dates, they know of no facts to the contrary. Mr. Hutchinson has met with one case in which the scar of a burn took on a keloid growth, and some other scars which had been left by cupping long previously passed afterwards into the same condition.

7. In the subjects of keloid can any other evidence of personal or family tendency to morbid growth be obtained?—There is no available evidence upon this point to enable your Committee to form any opinion. But it is worthy of note that in the case recorded by Hebra of the spontaneous disappearance of keloid tumours * he also saw several patches of keloid on one of the sisters of the patient. Hebra, who convinced himself in the course of an observation extending over several months of the involution of the tumours, learnt at the same time that a third sister and the mother had also suffered from similar tumours, but that in the case of the two latter these had already entirely disappeared.

Mr. Bryant has given us notes of two other cases in which keloid occurred, after the removal of a nævus in each case —the two children being *cousins*. In the one case—a child of six months old—the disease was situated on the shoulder; in the other upon the forehead.

8. The ages of patients affected with keloid.—Opinions appear to vary somewhat upon this point; but all seem to agree that keloid is comparatively rare in old age. Kaposi

* Hebra, *On Diseases of the Skin*, vol. iii. p. 278. New Syd. Soc.

states that it is very rare in young persons, occurring mostly at the middle period of life, commencing at puberty. The ages of patients now before us, however, do not substantiate this.

Thus one case is called congenital; in one the disease was noticed at six months, in two others at one year, in another in a child of 6, in another in a boy of 10. Other ages given are 16, 18, 24, 26, 33, and 40 years.

Keloid, therefore, may occur at any age, from the earliest infancy and all through adult life, but it is rare in old people.

(Signed) Dyce Duckworth.
Robert Liveing.
H. Radcliffe Crocker.
Jonathan Hutchinson (*Chairman*).
James F. Goodhart (*Secretary*).

XIV.—*A Calotte after Use in the Treatment of Ringworm.* Exhibited by Balmanno Squire, M.B. *Read November* 14, 1879.

THE calotte (a piece of pitch-plaister spread on calico) presented, in the condition exhibited, the appearance of a miniature hairbrush, but all the hairs on it had the frosted dead-white appearance peculiar to the hairs of a pronounced case of ringworm. All of these hairs were quite short, so that the calotte presented an appearance which might be compared to that of the chin of an old negro who had not shaved for several days.

The plan of treating ringworm in the present day in England, France, and America was that of epilation by means of forceps, aided, of course, by applications destined to destroy the parasite.

During a visit this summer to Milan, Mr. Squire noticed in the vast hospital of that city (a hospital containing as many as two thousand beds) that there was a ward set aside for the treatment of ringworm. The physician in charge of this ward obligingly explained the mode of treatment adopted there. The calotte, which in other countries has become a somewhat obsolete contrivance, remains still in vogue in Italy. It is applied twice a week, and each time that it is pulled off, the head is painted with tincture of iodine, and a

fresh calotte is at once applied. Mr. Squire, who had never seen a calotte used before, was much struck with its extraordinary capacity for achieving the wholesale eradication of diseased hairs. It appeared to him to effect a great saving of labour as compared with epilation performed with forceps, and he was surprised at the almost complete painlessness of the operation of pulling it off, even in the case of very young children. The exact degree of tenacity of the plaister is an important point, and must be different in summer to what it is in winter, and the plaister must be spread sufficiently thick. Mr. Squire had tried the plaister at the British Hospital for Diseases of the Skin, and had found it an efficient epilator in cases of true ringworm.

XV.—*Case of Traumatic Aneurism of the Scalp.* By W. J. Tyson, M.B. *Read November* 28, 1878.

W. M., æt. 56, hotel proprietor. In September 1875, whilst out shooting, a stray shot struck him on the back of the head, causing at the time considerable hæmorrhage, the blood spurting out three or four yards when the pressure of the fingers was removed. The bleeding was arrested by cold water and the application of a handkerchief round the head. The next morning, some rag, strapping, and a bandage were put on. All this time he saw no medical man. A week after the accident he consulted my father; the skin wound was healed, no more hæmorrhage had occurred, and nothing abnormal about the parts was noticed. Five weeks later he came to me complaining of a peculiar sensation at the back of the head, and he said that he felt sure the shot was still there; but I failed to feel anything like one.

He was not seen again until January 1877, sixteen months after the injury; there was now a firm hemispherical swelling, situated midway between the right mastoid process and the occipital protuberance, of the size of a common walnut. No bruit or pulsation could be made out. The tumour was punctured, and only a drop or two of blood escaped.

Removal of the lump was recommended.

On June 28 he came to me again; he now wished to have the tumour removed; for the last six months it had increased to the size of a small orange, and was giving rise to some pain.

On June 30, twenty-two months having elapsed since the accident, he was operated upon, Dr. Henry Lewis kindly assisting me. Just before the operation both failed to detect any pulsation or bruit.

A long incision was made horizontally across the tumour through the skin, and whilst proceeding to dissect back the flaps the tumour was accidentally nicked; immediately furious bleeding came on, the stream of blood darting out for several feet. The swelling was turned out as quickly as possible, and a sponge placed in the wound.

There was great difficulty in stopping the bleeding, for the parts were very vascular, and the position of the vessels somewhat inaccessible; and the size of the tumour had necessitated making a large wound. We secured the vessels as well as we could with ligatures, and firm graduated pressure was applied.

To complicate matters the patient had preferred to undergo the operation without chloroform.

The next day, when the bandage and sponge were removed, some smart bleeding came on from a vessel divided during the operation; this was secured by passing under it a tenaculum carrying a silken suture.

For two days he suffered with sickness, which prevented him from taking much nourishment; and on the third day a mild attack of delirium tremens came on, which lasted three days; after this he made gradual but progressive improvement.

The wound was daily washed with carbolic acid lotion, and afterwards dressed with carbolic oil, 1 in 40; this latter was continued until the wound had quite granulated up.

On July 24 he went out of doors for the first time, and on August 18—seven weeks after the operation—the wound had completely healed.

Remarks.—The nature of the case, I think, is plain: the artery, either the occipital or a branch between it and the posterior auricular, was wounded, but not divided by the shot; the opening in the vessel never closed, but the skin-wound over it did so rapidly. The tumour was slowly increased in size by the steady deposition of fibrin.

The skin over the tumour was not thinned; it is difficult, therefore, to say how much longer the aneurism might have existed before bursting.

It is somewhat remarkable that no pulsation should have been made out.

Several cases of traumatic aneurism have been reported from the partial division of an artery, and one in a similar position to mine is shortly reported in the 'British Medical Journal' of September 28, 1879, under the care of Mr. Willett. It was proposed in this case to cut down and divide the vessel and tie both ends, but the treatment of the case has, I believe, not yet been published.

The length of time—viz., twenty-two months—which the aneurism lasted is, I believe, almost unique; at least I have not been able to find one in surgical literature of so long a date.

This case illustrates well the importance of dividing or securing a partially divided artery before an aneurism has formed of such a formidable and certainly dangerous size as it did in my case.

XVI.—*Excision of both Hip-joints for Symmetrical Disease—Femoral Necrosis. Antiseptic operations. Successful result.* By J. Croft. *Read November* 28, 1879.

Ada G., æt. 4, was admitted, under my care, in St. Thomas's Hospital on January 3, 1879, for hip-joint disease on both sides. Two years previously she had fallen down stairs. She had limped during the last eleven months, and complained of pain in both hips and knees. She had been under treatment at St. Thomas's Hospital as an out-patient for three months, and afterwards at the Children's Hospital, in Waterloo Bridge Road. She had suffered more or less from starting pains at night for eight months, and as much in one leg as the other. On admission she was miserably thin and in bad health, and she was suffering from ulcerations of the cornea (strumous ophthalmia) as well as from the hip disease.

There was well-marked muscular rigidity at each joint. Attempts at movement caused pain. The thighs were somewhat flexed on the pelvis and the legs on the thighs. The feet were rather inverted. Spurious lordosis existed. There was no external swelling, and there was not any shortening.

She was allowed a good diet, with wine, and was carefully nursed. The keratitis was treated and cured. The

limbs were straightened and a modified double Thomas's splint adapted. Extension was maintained either by weights or elastic bands.

During the month following her health steadily improved, though she suffered somewhat at night and cried occasionally from starting pains.

On February 26, or between seven and eight weeks after her admission, a collection of fluid was discovered between the great trochanter and the anterior superior spine of the ilium.

About a fortnight later, or two months and a half after her admission, an attempt was made to evacuate the collection or abscess by the aspirator. A small quantity of thick puriform fluid was drawn off.

Six months after her admission, and seventeen months after she was first observed to limp decidedly, she was still suffering from muscular rigidity and occasional spasmodic pains in both joints. The fluid had re-collected on the left side. I therefore determined to excise the joints, and to operate on the left side first.

On May 17 the left joint was excised antiseptically, and, as it has been termed, subperiosteally.

On June 7, three weeks after the first operation, the right hip-joint was excised in the same way.

The wound on the left side healed in about five weeks' time, and the right side rapidly followed the example of the left.

With regard to the parts removed at the operations: on each side the femur was sawn across at the level of the base of the great trochanter.

The surface of the acetabulum was freshened by means of the gouge. The remaining cartilage and the granulations were cut away with the same instrument. The synovial membrane and its granulations were dissected out, and the lining membrane of the abscess on the left side was removed. The surfaces remaining after these procedures were carefully washed out with carbolic solution, and a solution of chloride of zinc (40 grs. to 1 oz.) was applied to them.

A double modified Thomas's splint was employed in the after treatment, and extension kept up by indiarubber bands.

Passive movements were commenced after the third week.

The parts excised are placed before you.

The parts from each side may be divided into four:—1. The epiphysis or capitellum; 2. The main mass, consist-

ing of the neck and top of the femur; 3. Pieces of synovial membrane and bone cut out from the acetabulum; 4. Small pieces of detached dead bone.

The epiphysis was found separated at the epiphysial line from the neck of the bone. On the left side its upper surface was for the most part bare, and small pieces of dead bone were adhering to it; and its under surface was irregular where it had separated from the epiphysial cartilage. The upper end of the neck of the bone was bare; small crumbs of dead bone were lying upon it or adhered to it. Some of these pieces have become detached, unavoidably, during manipulations. No trace of epiphysial cartilage remained. The bare condition of the neck is owing to the fact that the operation was done subperiosteally. It should be noticed that none of the trochanteric epiphysis remains on the specimens. That process was preserved and left attached to the gluteal muscles. The parts from the right side exhibit very similar changes, which are here more demonstrable. The separation between the epiphysis and the neck is easily seen, though they are yet loosely connected. Two small sequestra may be seen deeply imbedded in the neck of the bone, and a piece of dead cartilage is seen hanging by a thread of tissue to the epiphysis. The synovial membrane was swollen and the perisynovial tissues infiltrated, but their condition did not appear to be that of synovitis hyperplastica tuberculosa. The state of the parts justifies me in the opinion that there is symmetrical separation of the epiphysis on each side, and necrosis.

My objects in showing this case are as follows:—1. To illustrate the value of operating early in hip-joint disease, before the third stage has advanced. 2. The value of operating antiseptically. 3. The value of removing the parts freely. 4. The value of leaving the great trochanter attached to the muscles which are fixed to it. 5. The case is rare and interesting from its being one of double disease, and from the disease being symmetrical.

1. With regard to early operation: as the disease had been in progress for eleven months or more, it cannot be said that in point of time the operation was performed *very* early. It was not a case of *acute* necrosis of the epiphysis. That disease is attended by very urgent symptoms, and should be treated by very early operation. The case belongs to the chronic form of arthritis. I consider that the inflammatory changes began in the bone, and that the osteitis

terminated in necrosis and caries. This osteitis necrotica led to inflammation of the joint tissues. The osteitis and arthritis combined to disorganise the joint. Had the case been allowed to take its course uninterrupted by operation, the surgeon, following the routine treatment, recommended for the second and third stages of the disease, viz., rest, splints, opening abscesses as they arise, and so on, the child must have continued to be the victim of disease and suffering for many months, and probably for several years. The joints must have become stiff and immovable. This would have been a favourable course under the circumstances. She might have succumbed to tuberculosis of lungs or membranes of brain, or to amyloid changes in the abdominal viscera. I repeat that this case demonstrates the immense advantages which may be obtained by operating in good time.

2. *Antiseptic operation.*—Without antiseptic precautions, the excision of this joint is followed by some febrile disturbance and numerous painful dressings. In this case we were successful in maintaining the antiseptic system. A reference to the temperature chart shows that absolutely no febrile movement ensued. I believe the child was in the matter of temperament an uncommonly favourable subject. She began laughing and playing soon after the immediate effects of the operations had subsided. Where there is reason to fear that the disease for which the operation is about to be undertaken is of a tubercular character it is of consequence to prevent the induction of high temperature; that is, to avoid sharp febrile attacks. High temperatures appear to be favourable to the rapid propagation of tubercular changes.

3. The value of removing the diseased parts freely.—I attribute the good results in this case partly to having made the section of the femur on each side through undiseased bone, and to having dissected out or destroyed by chloride of zinc the remains of the diseased synovial membrane. A common cause of failure after excision of articular ends of bones is that of not cutting away all morbid bone or synovial membrane; in other words, of not having made the section through uncontaminated bone.

4. The gluteal muscles are not severed from their connection with the great trochanter. The attachment of the gluteus maximus to the great trochanter was split longitudinally, and the process of bone was also bisected, but the

trochanter and its muscles were not separated. The trochanter has renewed its attachment to the shaft of the femur. To this I attribute the fact that this child has such remarkably good movements at the joint. She can abduct the leg, invert the foot, and flex the thigh on the pelvis to a great extent. There is no fear of bony anchylosis in her case.

5. With regard to the propriety of excision in hip disease: some surgeons still see many objections to excision at this joint, looking upon the operation as almost always fatal and hopeless. I do not agree with those who condemn the operation. I have now performed excision of this joint *forty-five times.*

An analysis of my cases encourages me to continue the practice, and to practise the operation *early.* I would on this occasion direct attention to one result of an analysis of the forty-four cases. It is one which bears on the case before us this evening, and it is this: *twenty-one* of the cases were instances of *necrosis* either of the top of the femur or of the acetabulum.

I hold that if a surgeon knows that there is a piece of dead bone shut up in a joint he should perform an operation for the removal of that piece of dead bone.

If a surgeon knows that a loose cartilage is irritating a joint he takes steps to remove that body in the safest manner possible. It appears to me that there are more cogent reasons for removing dead bone from a joint. I would condemn in the strongest terms the practice of leaving these cases of hip-joint disease unexplored and unheeded.

6. Are there any signs or symptoms which may be taken to indicate certainly the presence of dead bone in hip-joint disease?—Excluding acute inflammationof the joint which presents very positive symptoms and signs, and limiting my remarks to chronic cases, I would say that those cases in which the symptoms are traced to an injury, and in which the signs and symptoms progress slowly and without hyperplastic swellings, are probably instances of necrosis. A case in which the disease has advanced slowly in that way, and in which a collection of fluid (or abscess) has slowly formed, is most probably one of necrosis.

7. I venture to submit the following formulæ as guides to operating:—

1. When there is fluid in the joint antiseptic incision should be made, as if the surgeon intended to excise, and he

should only desist on finding the articular structures in a condition from which they could rapidly recover and yield a movable joint.

2. When pus is known to be present, even if the surgeon is uncertain with regard to the state of the bone, he should excise.

3. If the surgeon is certain that necrosis has occurred he should decidedly excise.

XVII.—*Analysis of Forty-five Cases of Excision of Hip-joint.* By John Croft. *Read December* 12, 1879.

IN accordance with a promise which I made at the last meeting of this Society, I am here to give an account of the forty-five cases of excision of the hip-joint, to which I referred on that occasion.

I must ask for your indulgence in at least two respects: first, I ask you to consider the short time that I have had in which to prepare this analysis; and, secondly, I must ask you to bear with me whilst I take up rather more than the time usually allotted to speakers at this Society.

The subject is a deeply interesting one, and many questions in surgery and surgical treatment arise out of it. I shall be as brief as I possibly can. I intend to keep before me this aim, to endeavour to show that excision of the hip-joint may be made a successful operation, and that greater success attends the operation when it is performed as soon as abscess or fluctuation has formed than when it is practised after abscess has opened.

Before commencing to read the analysis of the cases I must first beg you all to understand fully that before operation was resorted to in any case every known reliable treatment suitable to the case had been tried to arrest the progress of the disease.

Ten cases, as the tables show, were in urgent need of speedy relief—such relief as could not be effectually given by rest, splints, or external applications. Thirty-five were treated in the Hospital for more extended periods, varying from one month to a year. No case was operated on until threatening abscess manifested itself.

And, secondly, I must beg you to dismiss from your minds

the very general rough statement made at the last meeting of the results of the forty-five operations.

Dismiss any false impression you may have had made on your minds of the number of deaths which occurred in consequence of the operations.

Up to the present time I have operated on forty-four cases, making forty-five excisions, one child having had both joints excised. I send round records of the cases arranged in a tabular form.

The first operation was performed fourteen years ago, when I was an assistant surgeon at St. Thomas's Hospital. The last operation was made about three weeks since.

Eleven cases are either under observation or under treatment. One child is dying of phthisis and scrofulous glands in the neck, but *her hip is practically cured*, and she is able to walk about upon it. Including this last in the list of cures, the total number of cures amounts to eighteen.

Of the sixteen remaining to be accounted for I will here only just say that six died from causes referable to the operation, one from diphtheria of the air passages, and nine from causes not referable to the operation, causes from which the children would otherwise have died. I shall give a more detailed account of these when I have spoken of the more congenial subject of the cases cured. (I send round table of cures.) Of the total of eighteen cured I know that sixteen are *absolutely* cured, and are living and sound and well at the present time. Two are potentially cured, viz., *Ivory* and *Alice Hooper*. I have been able to collect twelve and you have had the opportunity of examining them in the adjoining rooms. You have seen for yourselves that the scars are sound; that eleven of those present enjoy movement at the hips; and that eight have free movement. I think I may safely assert that sixteen of the cured cases have movable joints, without boasting of the nine who have so much more motion than the rest. Seven can stand on the leg of side operated on strongly and firmly.

Harry Euridge and Tommy Jones are exceedingly interesting specimens. Both of them had enlarged liver and albuminuria whilst under treatment by and for excision. Both recovered from that perilous condition.

Observe that each stands erect, without lordosis. The limb is straight, without any permanent flexion on the pelvis. In almost all the foot is directed forwards, or only a little everted, just sufficient to increase facility in walking.

Of course there is considerable shortening in almost all the cases. In many it amounts to 3½ inches. With regard to this condition there is a very interesting fact, of which I can only speak generally just now. The shortening is mainly due to the new joint having formed above the level of the acetabulum. The femur top has *not* found a new joint *in* the acetabulum, but has been drawn upwards past the acetabulum. The state of things in Charley Boswell, first exhibited to this Society (No. 3) in May 1873, illustrates this very well. However, in Ferris, Webb, Gunter, and some others, the retraction amounts to very little in degree.

On measuring the femur on the side operated upon, and comparing it with the normal femur, it may be demonstrated that the difference between the lengths is decidedly less than the distance between the heel and the floor, this distance being the measure of the apparent shortening. The cause of the comparatively small amount of real shortening of the femur had better be reserved for consideration at a later period.

Of the eighteen cases of cure twelve were instances of chronic panarthritis, commencing, as I believe, in the synovial membrane; and six were instances of chronic panarthritis, commencing, as I believe, in osteitis and terminating in more or less necrosis. The table going round gives a little more information on that head.

Fifteen of the operations were subperiosteal. Five were performed by what I have called a Y-shaped incision, all the rest by the longitudinal incision.

Three of the eighteen cases were performed antiseptically, and two partly antiseptically. In six abscess had been incised and sinus persisted, but in only two were the sinuses chronic.

There were three cases of perforation of acetabulum, viz., No. 3, Boswell; No. 10, Goodman; No. 29, Thomas Jones.

And note, in reference to this point, that amongst the cases recorded in the list of dead, sinuses had been open in eleven, and perforation was found in five, as against six and three.

Thirteen had been under treatment in Hospital for periods varying from two days to three months, four from three to six months, and one for eleven months, before operation was resorted to.

I might add more details of these cases of cure, but time will not admit of my doing so. I must trust now to your

obtaining more information from the tables, by your own examination of the patients, and by discussion later on.

On passing from this part of my subject (cures) allow me to say that one boy (Albert Curry) has been brought up from Portsmouth for this particular occasion; little Lizzie Hearn from High Wycombe, Bucks; and Webb from Beckenham.

T. Campbell, one of the absent, lives near Colchester, and could not be caught and brought up. Another is a cripple from having had double hip-joint disease, and cannot conveniently attend.

Deaths, *total*, sixteen out of forty-five operations.

These deaths include four cases for which, with my present experience, I should not think excision to be the best treatment.

These deaths are spread over fourteen years.

Five deaths occurred from preventible diseases—one case from diphtheria of the air passages, three from pyæmia, and one from septicæmia.

Six of the total number of deaths were attributable directly or indirectly to the operation; one case ten months and more after operation. That seems a large mortality; but I believe, with our present experience, a wiser selection of cases and thorough antiseptic treatment, this rate of mortality will be reduced.

The patient who died from pyæmia in 1878 was not treated antiseptically, and it was an exceptionally severe case. The patient was the subject of caries of lumbar and sacral vertebræ, and of psoas abscess. The joint abscess was open at the time of operation.

The nine other cases (deaths not attributable to operation) all lived for some length of time after.

As there was still more or less disease at the seat of operation at the time of death I have put these cases in the list of dead, although death was in no way attributable to operation.

One died two months and a half after operation of general tuberculosis; another four months—of tubercular meningitis; another six months after operation; another eighteen months; another two years; another two years and a month; another two years and a half. Two lived four years.

I might have returned six of these cases as recoveries, for they left the Hospital free from suffering and able to move about to some extent; but in the interests of science I have traced their progress and reported them as dead.

It seems a large proportion of failures to cures, but it is not to be taken as a standard. With improved diagnosis, by operating in good time, and by improved method of operating and after-treatment, I venture to think the proportion of failures will be considerably diminished, and the cures increased.

What I say here should be taken in conjunction with remarks under head of causes of failures in excision of the joint.

The number of failures after operation, or deaths after operation, should be compared with the number of deaths amongst those who are not subjected to operation.

Query: out of 100 cases of hip disease attended by open abscesses how many get well without operation? And how many succumb to the disease? And I might here add, how many of those who do not die (with the disease still in progress) recover with useful limbs, without deformity and without shortening?

With regard to the mortality after excision Mr. Holmes writes, p. 903: 'The operation is a dangerous one; at least a great many patients die after it—many, it is true, not from the operation, but from previous disease. Still the number who have died from the direct sequelæ of the operation has not been small in my experience. Nearly half of the published cases seem to have proved fatal from one cause or another.'

Now I have shown that not more than six of my cases have died of sequelæ—one from septicæmia, three from pyæmia, one after suppuration of knee following erysipelas (and he died from shock of amputation at hip ten months and more after excision), and one from thrombosis and asthenia.

Tuberculosis and waxy changes cannot be called 'sequelæ' of excision.

I cannot leave the topic of deaths after excision without protesting against the total number being mistaken for deaths in consequence of operation, or from the sequelæ of operation. The nine who died from tubercular disease and waxy disease of liver and kidneys would certainly have died from those diseases if the patients had not been operated on at all. One of the remaining seven was suffering from slight albuminuria, when he was attacked by erysipelas and consecutive abscesses in the knee-joint, which induced me to try amputation at the hip. Another of the seven was cut off by an accidental disease, viz., diphtheria.

I have admitted, however, that four cases died of pyæmia or septicæmia, one from the consequences of erysipelas, one from thrombosis and asthenia; in all six cases from the consequences of operation.

Of these six cases three were scarcely fit cases for operation according to my present views. In these the disease had been in progress for three or more years, namely: Pat Riley, No. 2; William Scarborough, No. 4; and William Brooks, No. 24.

Of one other death, that of Ernest Ingram, I would say that had I known him to be the subject of psoas abscess and vertebral caries I would not have operated upon him at all. He was suffering so severely that I excised for the purpose of relieving his sufferings. The object was to a great extent attained. The operation was not antiseptic, as the joint abscess was already open, and the discharge offensive. He died of pyæmia.

I say once more that I protest against the total of deaths *after* excision being considered deaths *from* excision.

I also beg that these statistics may not be compared with such as those given by Dr. Ashurst, or Hodge, or Good, or any authors who do not state the condition in which the patient was at time of operation and the nature of the disease. The general result of 163 deaths in 327 is given by Dr. Ashurst, but we are not informed how many of these were cases of acute necrosis, or how many of tubercular disease; nor are we told how many were operated on before abscess had burst, how many after abscess had burst, and *how long after*.

Now, among my cases of death, sinuses were already established in ten. Of the other six:—

1. One died of rapid tuberculosis two and a half months after.
2. One of diphtheria.
3. One of tubercular meningitis four months after.
4. One of tubercular inflammation of membranes of brain two years and one month after.
5. One of pyæmia.
6. One of tubercle in cerebellum and waxy liver one year and six months after.

Condition of the joint:—

1. At operation showed caries, no sequestrum.
2. At operation showed caries, no sequestrum.
3. At operation showed caries, no sequestrum; tubercular synovial disease.

4. At operation showed necrosis.

5. At operation showed tubercular and synovial disease, with caries.

6. At operation showed necrosis in top of femur.

I argue from this in favour of early antiseptic operation; that is, before abscess has burst and sinus formed.

I have arranged the deaths in form of a table, giving briefly the state before operation, the state at operation, duration of life after operation, and the cause or causes of death.

Those who died were *relieved* cases.

Of the eleven under treatment three are in hospital, and eight are at their own homes. The open wounds remaining after operation have not yet closed.

I have now accounted in a brief manner for the forty-five cases. Thirty-four can be spoken of as completed cases, eighteen as cured; six died from sequelæ of the operation, one from laryngeal diphtheria, and nine from diseases not attributable to the operation. And eleven are under treatment or observation.

I wish to demonstrate that there are advantages attending excision of the joint before sinuses have formed and become chronic; and I first direct attention to the length of time during which disease had been in progress before operation was resorted to, in those patients who succumbed eventually to diseases which are not attributable to operation. In six out of nine disease had been in progress for from one year to three or upwards. Comparing this with the length of time disease had been in progress before operation in cured cases, I find six had been suffering less than one year, including one case of six weeks' history, and one of three weeks; eight had been suffering from one to two years; two had been suffering from two to four years; and two had been suffering for four years or a little more. It would appear, therefore, that duration of illness before operation has not influenced the results so much as might have been expected.

The presence of chronic sinuses, however, *does* seem to have had some influence, for I find that of the cases of cure (eighteen in number) six only had had sinuses; two chronic, chiefly recent; and four recent sinuses from abscesses just opened; and amongst those who are included in the death list, numbering sixteen, there are eleven cases of open chronic sinuses before operation.

Amongst these cured and dead cases there are three and five cases of perforation respectively.

I think it is a fair inference that chronic sinuses and the occurrence of perforations of the acetabulum do severally or together influence the progress of cases for the worse.

I now feel anxious not to take up too much time by my paper, and yet there are many topics on which I ought to touch, viz. :—

1. The advantages which I claim for early (or relatively early) operation.

2. Formulæ with respect to indications for operations.

3. The mode of operation with reference to (*a*) the periosteum, (*b*) the leaving behind the epiphysis of the great trochanter, (*c*) the point of section of femur, and (*d*) the line of incision through soft parts in skin, and (*e*) operating with the aid of *antiseptics*.

4. The mode of after-treatment.

5. The causes of failures in excision at this joint.

6. The comparison of limbs after excision with limbs of those who get well without operation.

7. The time taken to get well by those not operated on compared with the time taken to get well by those successfully operated on.

These are all interesting questions. Perhaps I may be permitted to summarize what I have to say on three of these topics, viz.: I. Formulæ with respect to indications for operation; II. Causes of failure after operation; III. Advantages which I claim for early operation.

Formulæ.—1. When there is a collection of fluid in and about the joint in a case of well-marked hip disease, especially if associated with starting pains, antiseptic incision should be made, as if the surgeon intended to excise, and he should only desist on finding the articular structures in a condition from which they could rapidly recover and yield a movable joint.

2. When pus associated with panarthritis (or strumous disease of joint in children) is known to be present, even if the surgeon is uncertain with regard to the state of the bones, he should excise.

3. If the surgeon is certain that necrosis has occurred he should certainly excise.

Causes of failure :—

I. Operating too late in the progress of the case.*

* Why are not hip excisions as successful as knee excisions?

II. Not removing enough (*a*) of the acetabular region, (*b*) of the femoral portion, (*c*) of the synovial membrane and capsule.

III. Not providing free exit for discharges.

IV. Not operating antiseptically.

Thirdly.—I claim for what I have called early operation—

1. That in cases of tubercular disease early complete excision affords the best prospect of cure.

2. Immediate relief from pains of tension and spasmodic starting pains.

3. That it is made before muscles are much atrophied or stiffened by the products of inflammation.

4. That it shortens the duration of suffering and illness.

5. That it enables the child to go about earlier than it would go about if left without intervention treatment.

6. That it enables the surgeon to procure a painless movable joint at the hip.

7. That the shortening is only a trifle more than it is in the most favourable cases of ankylosis after destructive disease of the joint.

I have placed thirty-six of the forty-five joints excised upon the table—each numbered according to the numbers in the general table.

Pathological question not entered upon.

An asterisk at the end of the remarks in the last column indicat

Number and Year	Dates. Admission, Operation, and Discharge	Name	Age, Sex, and Side	Duration before Admission	Cause	Early Symptoms	Condition on Admission	Treatment in Hospital before Operation
1 1865	Ad. Aug. 2, 1865 Op. Aug. 22, Dis. Nov. 16, 1865	HERBERT WELLS	8 M L					For 3 weeks. Splint
2 1865	Ad. Aug. 16, 1865 Op. Aug. 23, 1865 Died Jan. 25, 1866	PAT RILEY	7 M	3 years			Opening behind and above trochanter; another over front of upper 3rd femur. Femur displaced upwards and backwards	In Hospital 1 week before operation
3 1871	Ad. Sept. 11, 1871 Op. Nov. 22, Dis. July 12, 1872	CHARLES BOSWELL	7 M R	9 mths. or more	Fall with legs apart	Lameness, pain at night, swelling, pain on pressure in groin. Spasmodic pains	In addition to usual symptoms swelling along outside thigh at top	For more than 2 months; at home for 6 months and more. By long outside splint and extension. Abscess opened
4 1872	Ad. Nov. 27, 1871 Op., excision, Jan. 10, 1872, amputation, Oct. 25, Died Oct. 26, 1872	WILLIAM SCARBOROUGH	5 M R	3 years	Fall off stool	Usual lameness first noticed. No strumous history	Dislocation. Fixed at right angle. Sinus above and behind great trochanter open 8 months. Scar on outer side of thigh	For 1½ months
5 1872	Ad. May 9 Op. Aug. 30 Died Nov. 18	LEWIS SCOTCHER	6 M R	1 mnth	Fall down stairs	Lameness. Little or no pain. Fullness and tenderness in groin		For nearly 4 months
6 1873	Ad. Nov. 11, 1872 Op. Feb. 12, Dis. June 6	ALBERT EDWARD CURRY	3 M L	16 mths.	No accident. Brothers and sisters healthy, parents healthy	Limping. Pain in hip	Swelling; shortening 1½ inch. Muscular rigidity	For 3 months. Long outside splint; extension
7 1873	Ad. Feb. 21 Op. March 28 Dis. June 16, to Margate	ELIZA BRIARS	8 F R (*mem.* both joints diseased)	Abont 1 year or 18 mths.	Family phthisical. Father died of phthisis, mother of disease of elbow		*Right hip.* Eversion, abduction, abscess front and outer side of thigh *Left hip.* Swelling, sinuses, inversion, adduction, flexion of thigh on abdomen, shortening	For 5 weeks. Rest Splint; extension by weight; difficulty in treating as opposite hip diseased and displaced

TABLE.

hat the case has been examined by the Sub-Committee on Hip Disease.

Condition shortly before Operation	Operation	Disease found at Operation	Result		After Operation	Cause of Death	Remarks
			Cured	Died			
	Excision, not subperiosteal			D.	2 years or more Age 11 when died		Died of waxy liver, &c.; sinus open, acetabulum bare, end of femur covered
	Excision, not subperiosteal; original opening extended, head of femur removed, acetabulum gouged clear of disease	No necrosis		D. Jan. 25, 1866	6 mths.		Tubercular disease, waxy liver
Abscess open. Pain on movement	*Excision*, subperiosteal. Sayre's method. Sequestra removed	Necrosis of acetabulum; perforation	C. Permanent		1 year		Total duration of illness 1 year and 9 months; walks very well with a high-heeled boot; able to walk 5 miles; stands and hops on excised limb; joint almost fixed, 2 in. shortening *
	Excision, subperiosteal; top of femur made to protrude at wound before saw applied	No necrosis; caries		D. day after amputation of limb	10 mths. and 15 days after excision	Waxy state of liver, &c. at post mortem examination	Periostitis of femur followed operation; erysipelas ensued, and suppuration in the knee-joint. For this amputation was performed on Oct. 25. Died next day
	Excision	No necrosis		D.	2½ mths.	General tuberculosis followed upon the excision	At post mortem examination, acetab. and top of femur found exposed and diseased; no loose sequestrum
	Excision, head of femur only		C. Permanent		Discharged 3 mths. and 3 weeks after operation		Living Dec. 1879
	Excision, subperiosteal		C. Permanent		2 mths. and 18 days		Total illness, 20 months and 18 days. Right: straight, firmly ankylosed. Left: also ankylosed; flexed, with lordosis; shorter than right; walks fairly well, but with peculiar gait, from fixation of both hips *

An asterisk at the end of the remarks in the la t column indicates

Number and Year	Dates. Admission, Operation, and Discharge	Name	Age, Sex, and Side	Duration before Admission	Cause	Early Symptoms	Condition on Admission.	Treatment in Hospital before Operation
8 1873	Ad. April 21 Op. May 14 Died May 21	ELLEN HOATH	11 F L	Some months	Attributed to fall. Parents living and well. Brothers and sisters healthy but delicate		Fluctuation; pain of all kinds; large abscess	For about 3 weeks. Abscess opened; splint; extension
9 1873	Ad. June 19, 1873 Op. Feb. 4, 1874 Dis. May 30, 1874	THOMAS CAMPBELL	7 M R	6 mths. or more	Notes do not state. No dresser's notes of family history		Flexion of thigh, extreme muscular rigidity of thigh close up to ilium; large abscess formed on outer side of thigh	For 11 months. Leg straightened by extension. Sayre's splint; abscess opened; bracketed long outside splint
10 1874	Ad. March 11, Op. April 4, Dis. Sept. 1	EDWARD GOODMAN	12 M L	1½ years	Fall—made worse by fall at cricket later, 9 months ago. Father died of phthisis, one sister of strumous abscesses in neck	Lameness. Pain	Had been in bed 2 months before admission; abscess forming	For one month. Splints; extension by weight; abscess opened
11 1874	Ad. Feb. 14, 1874 Op. May 27, 1874 Dis. Aug. 29, 1874	DANIEL DALEY	7 M R	2 years	Fall. Inherited syphilis. Strumous	Pain in hip and knee. Lameness	Large tense abscess outer and front of thigh half-way down; shortening 1 inch; eversion and flexion, tilting of pelvis great	For three months. Splints; extension by weight; abscess opened
12 1874	Ad. Oct. 21, 1874 Op. Jan. 25, 1875 Dis. June 15	THOMAS TAYLOR	4 to 5 (sister says 5) M R	8 or 9 mths. (sister says 6 mths.)	No history of injury. Mother died of ovarian disease in Guy's Hospital. Father alive, and well; other children well	Lame, and fell about when walking. Pain in knee. Convergent squint since a fall 2 years ago	At or soon after admission abscess formed in groin and upper inner side of thigh. Not able to walk at all on admission. Pain on movement	About 3 months. Abscess incised, and large quantity of pus evacuated. Rest, splint, extension by weight
13 1874	Ad. Nov. 4, 1874 Op. Mar. 20, 1875 Died April, 1875	CHARLES H. BOYTON	4½ M L	6 mths.	No history of injury. Family said to be healthy	First pain in knee. Walked on toes. Starting pain 9 weeks. Fullness in groin and tenderness. Muscular rigidity	Fluctuation, increased tenderness, muscular rigidity, starting pains; pain in knee and down thigh	About 4 months. Rest, splint, extension by weight. Liquor vesicatorius

TABLE—*Continued.*

that the case has been examined by the Sub- Committee on Hip Disease.

Condition shortly before Operation	Operation	Disease found at Operation	Result		After Operation	Cause of Death	Remarks
			Cured	Died			
Abscess open. In state of hectio	*Excision*	Acetabulum perforated; pelvic abscess		D.	7th day	Septicæmia, (?) a case of rapid tuberculosis	Liver fatty
Abscess open. Shortening 1½ inch	*Excision*, subperiosteal; acetabulum gouged	Caries; no sequestrum; strumous disease of synovial membrane	Left hospital much improved and wound nearly healed		Discharged 4 mths. after operation		Dec. 1879 alive and well, walking about
Abscess open	*Excision*, subperiosteal; four large sequestra extracted from acetabulum and several small pieces	Extensive necrosis of acetabulum; perforation	C. Permanent		Discharged 5 mths. after operation		Total illness, less than 4 years. Free movement in flexion, extension, abduction and adduction, 6 in. shortening; walks with considerable limp. Is able to stand, but not very firmly, on excised limb *
Abscess open	*Excision*, subperiosteal	Head and neck of femur atrophied; rami of pubes and ischium carious; acetabulum filled up		D.	Died in Lambeth Infirmary April 24, 1878 4 years after operation	Cough, waxy disease of liver, spleen, and kidneys, &c.	Never returned to me for treatment. Sinus open in spring, 1877
Abscess open	*Excision*, subperiosteal	Strumous disease of synovial membrane, &c. No necrosis	C.				Living Dec. 1879. Total illness then 4½ years. Limb flexed; wasted. Weeping sinus in groin. Cannot stand on leg. Movement slight. 3½ in. short*
	Excision, subperiosteal	Caries of head of femur. No necrosis.		Died of diphtheria; wound in bad state	12th day Rigors on 5th day		Died of diphtheria

An asterisk at the end of the remarks in the last column indicates

Number and Year	Dates. Admission, Operation, and Discharge	Name	Age, Sex, and Side	Duration before Admission	Cause	Early Symptoms	Condition on Admission	Treatment in Hospital before Operation
14 1875	Ad. June 22 Op. July 14 Dis. Nov. 1	EMILY MICHIE	6 F R	12 mths.	Attributed to fall at school. No consumption in family		Tilting of pelvis. Abscess open outer side upper 3rd. No real shortening. Swelling over great trochanter. Pain on slightest movement. No startings at night	In Hospital 4 times. Three weeks' treatment. Long outside splint, extension by weight
15 1875	Ad. June 24 Op. Sept. 9 Died Sept. 25	WILLIAM HENRY DUFF	7 M R	? 4 years	Attributed to fall. Mother afterwards died of phthisis		Shortening 1½ inch. Tenderness behind trochanter. Abscess ditto. Sinus open outer side of upper 3rd thigh. Rotation outwards. Pain in knee	For over 2 months. Splints, Sayre's splint, extension by weight; rest
16 1875	Ad. May 1 Op. Oct. 23 Died Feb. 12, 1876	ELIZA L. FIDDLER	5¾ F L	18 mths.	Attributed to fall.	Pain in knee, lameness	Continually in pain. Swelling, tenderness. Flexion. Lordosis. Shortening apparent. Abscess formed outer side thigh, upper part, and in groin. Scarlet fever in June and albuminuria	For nearly 6 months. Rest, splint, extension; leeching
17 1875	Ad. Nov. 17, 1875 Op. Dec. 15, 1875 Dis. June 28, 1876	ELIZABETH HEARN	5 F R	18 mths.	Fall. Both parents dead of consumption	Pain in knee, lameness, later starting pains	Starting pains at night. Pain on movement. Swelling in groin and outside of thigh. Muscular rigidity. Tilting of pelvis. Leg straight	For 1 month. Splint, extension; leeching, actual cautery
18 1876	Ad. Mar. 9, 1875 Op. Mar. 8, 1876 Dis. July 14, 1876	HENRY DAY	5 M R	4 mths.	Fall on hip. Father and mother well, brothers and sisters unhealthy	Lame	Signs and symptoms of 1st stage passing into 2nd. Swelling little	For 1 year. Thomas' splint, extension by weight; abscess opened
19 1876	Ad. Oct. 2, 1875 Op. Mar. 15, 1876 Dis. May 21, 1876	MARGARET MACCARTHY	12 to 13 F R	10 mths.	No history of injury. Father and mother living, also brother and sister	Pain in hip and foot supposed to be growing pains	Unable to bear slightest weight or movement. In great pain	For five months. Splint, extension by weight, Thomas' splint; aspiration of abscess; later incision into abscess

TABLE—*Continued.*

that the case has been examined by the Sub-Committee on Hip Disease.

Condition shortly before Operation	Operation	Disease found at Operation	Result		After Operation	Cause of Death	Remarks
			Cured	Died			
Sinus open; swelling, pain on movement	*Excision*, subperiosteal	Caries. Atrophy of head and neck of femur, necrosis in acetabulum, four pieces	Practically cured of hip disease. Free movement	Died of Pott's disease of spine and phthisis, June 1879	4 years after excision	Of phthisis and Pott's disease of spine	Jan. 17, 1879. Seen in Cleveland St. Infirmary. Sinus open, drop or two of pus, then closes for days; free movement. Pott's disease of spine, phthisis
Aggravated; sinus open; pain	*Excision*, subperiosteal	Caries of head and neck of femur, which were also extremely atrophied and displaced. Acetabulum lined by granulations		D.	16 days after excision	Exhaustion, anæmia, thrombosis of femoral vein	
Aggravated; abscess not open	*Excision*, subperiosteal. Thomas's splint afterwards	Tubercular disease of synovial membrane, loosening of epiphysis, no necrosis		D.	111 days after operation	Tubercular meningitis	
Large abscess formed	*Excision*, subperiosteal. Thomas's splint afterwards	Epiphysis loosened; caries of acetabulum	C.		Discharged 6½ mths. after excision		Total illness less than 5 years; in good health. Free movement in flexion and extension, adduction good, abduction fair; limb slightly flexed, 2½ in. shortening, is able to walk about ½ mile and then tires; stands on excised limb, but not very securely *
Abscess open; pains	*Excision*, subperiosteal. Y-shaped incision, Thomas's splint afterwards	Necrosis in acetabulum		D.	2 years and 6 mths. after operation	Waxy degeneration of liver, spleen, and kidneys	Sinus remained open, but he walked about well, and did not suffer from his hip
Abscess open; hectic, severe pains	*Excision*, subperiosteal. Y-shaped incision. Sol. zinci chlor. (gr. 40 ad ℥j) applied. Thomas' splint afterwards	Osteomyelitis, femoral; caries of acetabulum	C.				Total illness less than 3 years and 8 months. Living Dec. 1879. Sound, strong, and active; walks well and firmly, and stands securely on excised limb; very free movement in all directions; 3½ in. short *

An asterisk at the end of the remarks in the last column indicates

Number and Year	Dates. Admission, Operation, and Discharge	Name	Age, Sex, and Side	Duration before Admission	Cause	Early Symptoms	Condition on Admission	Treatment in Hospital before Operation
20 1877	Ad. Nov. 6, 1876 Op. Jan. 24, 1877 Dis. May 17, 1877	ALBERT ALLEN	12 M R	7 mths.	Left knee excised. No injury to hip. (?)From bearing weight on right limb, to save left. Mother living	Lameness, pain in right hip; waked at night by it	Large abscess formed. Pelvis tilted. Adduction. Rotation inwards. Shortening 1 inch by Nélaton's line. Muscular rigidity. Flexion to angle 35°	For nearly 3 months. Double splints; aspiration of abscess
21 1877	Ad. Nov. 7, 1876 Op. Feb. 10, 1877 Dis. July 29, 1877	SARAH IVORY	8 F L	4 years or more Never able to run about like other children			Great deformity. Angle 45°. Shortening 1½ by Nélaton's line. Large abscess. Fibrous union	For more than 3 months. Abscess opened; extension by weight, no splint could be applied ; rest
22 1877	Ad. Feb. 27 Op. Mar. 3 Died Mar. 18	HENRY GRANT	6 M R	6 mths. (?)more	Attributed to fall. Family history good	Lameness, unable to put foot to ground	Swelling. Redness, fluctuation. Pain on any movement. Adduction. Rotation inwards. Shortening	For three days only. Long outside splint for each side, extension by weight
23 1877	Ad. Feb. 16, Op. May 5, Dis. Aug. 14	ALICE HOOPER	4 F R	(?)			Flexion, muscular rigidity, severe pain	For 2½ months. Thomas's splint, extension, leeching
24 187	Ad. April 24, Op. May 12, Died June 1	WILLIAM BROOKS	11 M L	Long time : some years			Flexion, and adduction of thigh, with displacement of head backwards. Pain caused by percussion over troch. major and by abduction of thigh. Patient much enfeebled by *small-pox just before admission*	For 17 days. Splints, extension by weight
25 1877	Ad. Mar. 20, Op. May 16, Dis. Oct. 24	CHARLES HENRY FERRIS	4 M L	Always limped, worse 7 months		Always limped since first walked. Last 7 months has not walked at all	Shortening, very little flexion, no sinuses ; pain when hip is handled	For about 2 months. Splints, extension, leeching
26 1877	Ad. Sept. 18, 1877 Op. Dec. 12, 1877 Dis. July 6, 1878	FREDERICK LIDDIARD	5 M R	7 mths	No history of injury. Father consumptive	Lameness 7 months ago, since then unable to walk. Spasmodic pains	Anæmia. Sickly. Signs, and symptoms strongly marked ; swelling at back	For about 3 months. Double Thomas's splint, extension by weight, incision

TABLE—*Continued.*

that the case has been examined by the Sub-Committee on Hip Disease.

Condition shortly before Operation	Operation	Disease found at Operation	Result		After Operation	Cause of Death	Remarks
			Cured	Died			
Aggravated; pains	*Excision*, subperiosteal. Free removal of soft parts and bone. Thomas's splint afterwards	Necrosis of acetabulum; perforation		D. Feb. 1879	2 years and 1 mth. after operation	Inflammation of membranes of brain (Dr. Yates Richmond)	Further necrosis took place, and pieces were removed. Boy had been previously subjected to excision of knee-joint. Firm ankylosis took place, and remained sound
Angle of flexion 105°; abscesses open, pain on movement	*Excision*, subperiosteal. Leg straightened. Acetabulum cleared of disease. Thomas's splint afterwards	All articular structures had disappeared, neck of femur much atrophied	C.				Living Dec. 1879, but ill from scrofulous glands and pulmonary phthisis. July 1880, still living; total illness about 6½ years
Abscess rapidly increased	*Excision*, subperiosteal. Longitudinal incision. Drainage tube into pelvic abscess. Thomas' splint afterwards	Perforation of acetabulum, necrosis of same, pelvic abscess		D.	15th day	Pyæmia	
Aggravated: fluctuating abscess	*Excision*, subperiosteal. Thomas's splint afterwards	Synovial disease chiefly; caries of head of femur, loosening of epiphysis	C.		Discharged 3 mths. and 1 week after operation		Living Dec. 1879, well and strong. Occasionally scar opens, joint rather stiff, extension and flexion slight, shortening not great
Dislocation, pain, swelling	*Excision*, subperiosteal	Head of femur carious, sequestrum in neck of femur, acetabulum carious		D.	20 days	Pyæmia	Had suffered long time before attack of small-pox
	Excision, of head of femur only. Y-shaped incision, synovial membrane dissected out. Solution of chloride of zinc applied	Synovitis hyperplastica granulosa	C.		Discharged 5 mths. and 2 weeks after		Total illness less than three years. Movement very limited, ⅝ in. shortening, able to stand on excised limb, but not firmly *
Hectic. Abscess open at back of joint, lateral curvature of spine commencing	*Excision*, subperiosteal. Chloride of zinc solution (40 grains to ℥j) to remains of synovial membrane and interior of abscess	Necrosis in head of femur, ephiphysis loosened, caries of acetabulum		D. May 10, 1879	About 1 year and 6 months	Tubercle in cerebellum, waxy disease of liver, spleen, &c.	Sinus still open. Suffering from hip. Further necrosis of femur occurred, and was removed

An asterisk at the end of the remarks in the last column indicates

Number and Year	Dates. Admission, Operation, and Discharge	Name	Age, Sex, and Side	Duration before Admission	Cause	Early Symptoms	Condition on Admission	Treatment in Hospital before Operation
27 1877	Ad. Oct. 16, 1877 Op. Dec. 19, 1877 Dis. May 6, 1878	ANNIE CLARK	6 F L	4 years. From Hastings			Flexion of thigh on abduction, angle 102°; dislocation of femur, sinuses about hip	For two months. Double Thomas's splint, extension by weight; examined under chloroform
28 1878	Ad. Nov. 3, 1877 Op. Jan. 16, 1878 Dis. June 26 1878	EMILY PHILLIPS	5 F L	4 mths.	Knocked down by a cricket-ball. Limped when got up. Mother's family consumptive		Well-marked signs and symptoms of first passing into second stage of hip disease. Starting pains, severe ulceration of cornea	For 2½ months. Double Thomas's splint, extension by weight
29 1878	Ad. Dec. 31, 1877 Op. Jan. 30, 1878 Dis. May 13, 1878	THOMAS JONES	8 M L	4 years	Fall off another boy's back		18 months previously necrosed bone from ramus of pubes removed by me. On admission, sinus still open, symptoms of hip-joint disease	For 1 month. Limb almost fixed
30 1878	Ad. Oct. 12, 1877 Op. Feb. 20, 1878 Dis. May 5, 1878	HENRY J. EDWARDS	7 M R	2 years	Always delicate		Pain, cannot walk without help, and then limps. Apparent lengthening, pelvis being tilted up on opposite side. Night pains most severe. Under treatment in Hospital before	For more than 4 months. Rest, splints, extension, abscess opened antiseptically
31 1878	Ad. Feb. 26, Op. March 6, Dis. May 11	HECTOR WEBB	9 M L	(?) 5 weeks only	Not attributed to injury. Delicate boy. Brother has disease of foot		Much tilting of pelvis, no actual shortening. Fullness of hip-joint, tenderness and swelling in upper two-thirds of thigh, fullness in groin, but no special tenderness, muscular rigidity, acute pain, on pressing femur upwards, and rotation outwards, also pressing troch. inwards; lordosis; gluteal muscles wasted	For 1 week. Splint, extension

TABLE—*Continued.*

hat the case has been examined by the Sub-Committee on Hip Disease.

Condition shortly before Operation	Operation	Disease found at Operation	Result		After Operation	Cause of Death	Remarks
			Cured	Died			
Position of thigh improved, sinuses open, fresh abscesses formed	*Excision*, subperiosteal. Abscess laid open and pelvic abscess drained	Old perforation of acetabulum, abscess in pelvis, atrophy and caries of head of femur	Under treatment. Sent to Margate and Hastings		2 years since operation		
Abscess in groin; pain	*Excision*, subperiosteal. Antiseptic, chloride of zinc solution applied	Extensive disease of synovial membrane, necrosis of pubic part of acetabulum, epiphysis loosened	Under treatment at her own home		Nearly 2 years since operation	Prognosis bad	Dec. 1879, still living. Sinus small, open. Disease of abdominal lymphatic glands, enlarged liver; health very bad
Deformity, sinuses, and abscesses forming; health bad	*Excision*, subperiosteal, and preserving great trochanter. Sinuses laid open, pelvic abscess drained, limb straightened. Double outside splints afterwards	Loose sequestra in acetabulum, old perforation, pelvic abscess	C.		Discharged 3½ mths after operation		Total illness less than six years. Sinus discharging slightly. Cannot stand on limb. 2¾ in. short. Considerable limp *
Sinus open, pain on movement	*Excision*, subperiosteal. Y-shaped incision, great trochanter preserved and attached to top of femur by silver wire. Thomas's splint afterwards	Synovitis hyperplastica, tuberculosa, caries of head of femur and acetabulum	C.		Soundly healed in 4 months	N.B. In this case great troch. attached to femur top by silver wire sutures answered well	Total illness 2 years and 8 months. Perfectly well. Movement very fair in flexion, extension and adduction, but no abduction; 2 inches shortening, limb a good deal wasted; walks well and firmly, can stand on excised limb *
Fluctuating abscess distinct; much pain, starting pains	*Excision*, subperiosteal. Great trochanter attached to femur by suture. Partly antiseptic. Y-shaped incision. Chloride of zinc solution applied. Thomas's splint afterwards. After treatment antiseptic, no spray used	Synovitis hyperplastica, large abscess under epiphysis	C. 70 days about		70 days after operation. Remains cured 9 months after excision		Total illness 5 months. Had necrosis in tibia after the hip disease and operation. Remarkably well: exceedingly good movement in all directions, limb very well developed, 3 in. shortening; stands well and firmly on excised limb, but cannot hop upon it *

An asterisk at the end of the remarks in the last column indicates

Number and Year	Dates. Admission, Operation, and Discharge	Name	Age, Sex, and Side	Duration before Admission	Cause	Early Symptoms	Condition on Admission	Treatment in Hospital before Operation
32 1878	Ad. Feb. 26, Op. March 6, Dis. June 2	HENRY EURIDGE	6 M R	2 years	Fall from table. Father's mother died of consumption. Sister had diseased knee, Dec. 1879. Mother recently died of phthisis and premature confinement		*Albuminuria.* Thigh flexed upon pelvis, no ankylosis, pain on movement in any direction; *much swelling of hip* and fluctuation, pain in knee, emaciated, lordosis, pale, shortening, displacement	For 1 week. Good diet; aspiration of abscess.
33 1878	Ad. April 12, Op. May 22, Dis. Oct. 25	NATHANIEL DALE	11 M L	2 years	Fall on hip from a cab		Fluctuating abscess below left groin in front of thigh. Pain on flexing limb and pressure on great trochanter; fibrous ankylosis, lordosis, adduction and slight rotation inwards, 2⅛ inches shorter than opposite limb, top of great trochanter ½ inch above Nélaton's line	For 40 days. Long outside splint, and Thomas's splint later, aspiration of abscess.
34 1878	Ad. Feb. 6 Op. May 29 Died June 9	ERNEST INGRAM	17 M R	7 weeks	Slipped when walking, both legs became abducted, consumption denied by family		Pain on movement, no shortening, legs slightly rotated outwards, no effusion, slight muscular rigidity, strumous appearance; ulcerated open strumous abscess in front of left ear, disease of testes	For about 3 mths., long outside splint, extension by weight, antiseptic incision into abscess; double Thomas's splint
35 1878	Ad. June 17 Op. July 13 Dis. Nov. 15	LAURA STEBBINGS	19 F R	18 mths.	? No family history of phthisis	Pain in hip and knee, hip began to swell soon after, starting pains 6 mths. ago	Shortening 1½ inch, deformity, head of femur dislocated, sinuses open and large abscess, rotation outwards; tilting of pelvis	About 1 mth., rest, long outside splint
36 1878	Ad. April 30 Op. July 24 Dis. Oct. 27	EDWARD SULLIVAN	11 M L	2 years	Scarlatina	Limping and pain, swelling soon after	No shortening, no pain, full movement at hip-joint. Abscess in front of thigh upper 3rd, *fluctuation* distinct upper part of buttock, not tender. Patient looks weakly, veins prominent over abscess	For nearly 3 mths., splint, extension, aspiration of abscess twice

TABLE—*Continued.*

at the case has been examined by the Sub-Committee on Hip Disease.

Condition shortly before Operation	Operation	Disease found at Operation	Result		After Operation	Cause of Death	Remarks
			Cured	Died			
Two large abscesses at back of joint and buttock. Displacement great	*Excision*, subperiosteal. Y-shaped incision, abscesses laid open, partly antiseptic. Thomas's splint afterwards	Neck of femur thinned and perforated by abscess, granulations on head of femur and in acetabulum	C.		95 days after operation. Remains cured 9 months after excision		Total illness less than 2 years and 8 months. Remarkable case. Enlarged liver and albuminuria subsided. Scar sound; limb well developed; very free movement. Stands, but not securely, on limb; pelvis tilted to diseased side. 3½ in. actual, 1½ in. apparent shortening*
Large abscess. Displacement great	*Excision*, subperiosteal antiseptic. Y-shaped incision, great trochanter wired to top of femur, abscess laid open. Chloride of zinc applied	Necrosis and sequestra in acetabulum, perforation of acetabulum, subarticular ostitis of femur	Under treatment at Yarmouth		18 mths. since operation		Antiseptics failed. Dec. 1879, living, sinus open, at Yarmouth, improving in health
Abscess open, fluctuation, discharge offensive, hectic	*Excision*, subperiosteal, Y-shaped incision, synovial membrane dissected out, great trochanter wired to femur top	Synovitis hyperplastica tuberculosa; extensive caries of head of femur		D.	On 11th day	Pyæmia, miliary tubercle in spleen, caries of lumbar and sacral vertebræ, psoas abscess, liver amyloid and fatty	Operation with view of relieving pain and suffering; proved unsuitable case
Sinuses and as on admission	*Excision*, head of bone only sawn off, sinuses and abscess laid open, sequestrum extracted from lip of acetabulum, limb straightened, splint	Sequestrum in outer lip of acetabulum, head of bone dislocated outwards but not diseased (primarily)	In about 4 mths. left Hospital much improved				Prognosis good
Re-filling of abscess, anæmia	*Excision*, subperiosteal antiseptic, Y-shaped incision after Langenbeck, section through neck of femur, synovial membrane dissected out; chloride of zinc applied, Thomas's splint	Necrosis in acetabulum, tubercular caries of femur, much erosion, synovitis hyperplastica	Under treatment Margate for 6 mths.				Dec. 1879, sinuses open, health delicate though much improved; wears splint. July 1880, just well; total illness 4¼ years

An asterisk at the end of the remarks in the last column indicates

Number and Year	Dates. Admission, Operation, and Discharge	Name	Age, Sex, and Side	Duration before Admission	Cause	Early Symptoms	Condition on Admission	Treatment in Hospital before Operation
37 1878	Ad. June 28, 1878 Op. Sep. 26, 1878 Dis. Ap. 25, 1879	WILLIAM ROACH	4 M R	8 mths.	No known injury	Limping and pain	Limb advanced, everted, and apparently lengthened, 1st stage; tenderness about hip, pain on movement, spasmodic pains at night, fullness in groin	For 3 mths. Thomas splint, extension by weight
38 1878	Ad. April 1, 1878 Op. Oct. 9, 1878 Dis. May 28, 1879	WILLIAM GRAY	17 M L	4 mths. (?) more worse 3 weeks' gonorrhœa 7 mths. previously but no joint affected		3 weeks before admission had attack of pain	Pain in hip-joint, tenderness on flexion and on pressing head of bone inwards, limb starts at night, fluctuation on outside of upper 3rd of thigh	For more than 8 mths., rest, splint, extension by weight, aspiration of large abscess, antiseptic incision
39 1879	Ad. Oct. 25, 1878 Op. Jan. 14, 1879 Dis. May 26, 1879	FRANCES NORRISH	4 F R	7 or 8 mths. Worse 10 days from 2nd fall	Fall; no family history of consumption	Attended Orthopœdic Hospital for 7 months, limping, pain in knee starting pains at night	Pain in knee and on manipulation of hip	For 2½ mths. double Thomas's splint, extension by weight, iodine
40 1879	Ad. Mar. 18 Op. Mar. 20 Dis. May 25, 1879	THOMAS KNOWLES	9 M L	3 weeks	Fall		Flexion of thigh, Shortening 1½ in., displacement, rotation outwards, fluctuation, pain on movement	For 2 days only, double Thomas's splint
41 1879	Ad. Jan. 3 Op. May 17	ADA GUNTER	4 F L	11 mths.	Fall 2 years before	Limping pain in knee, and hips (both), starting pains 8 mths., as much in right as left	Hips flexed, muscular rigidity, pain on movement, knees flexed, feet everted, no shortening, more pain in right side	For more than 5 months, double Thomas's splint, aspiration of abscess on March 14
42 1879	Op. June 7	ADA GUNTER	F R					For 6 mths., no aspiration required

ABLE—*Continued.*

at the case has been examined by the Sub-Committee on Hip Disease.

Condition hortly before Operation	Operation	Disease found at Operation	Result		After Operation	Cause of Death	Remarks
			Cured	Died			
Abscess in groin, pains	*Excision*, subperiosteal, antiseptic, curved incision, double Thomas's splint afterwards	Necrosis in acetabulum, several small pieces; epiphysis loosened	Under treatment at his own home				Dec. 1879, sinus open, health not good. July 1880, much better, nearly well
Very large abscess in outer side thigh, open, lischarge profuse; under antiseptic treatment, pains severe	*Excision*, subperiosteal, antiseptic, incision vertical, chloride of zinc applied, sequestra dug out	Extensive necrosis in acetabulum, pieces imbedded, requiring to be dug out.	Under treatment at Margate		Now, Dec. 1879, 13 mths.		Dec. 1879, now 13 mths. since operation. July 1880, *died* at home from hæmorrhage from bowels, sinus open
Fluctuation in groin, severe pains	*Excision*, subperiosteal, antiseptic, Y-shaped incision, chloride of zinc applied; double Thomas's splint afterwards	Synovitis hyperplastica, caries of top of femur; loosening of epiphysis	Under treatment at her own home				*Mem.*: suffered from carbolism; urine black. After a time carbolic acid given up. Sinus remains
Fluctuation marked, shortening and signs of separation of epiphysis	*Excision*, subperiosteal; antiseptic maintained, epiphysis extracted, synovial membrane dissected out	Necrosis of epiphysis, *acute necrosis of epiphysis*	C.		Healed by 51st day		Total illness 3 mths. Dec. 1879, sound and well: very fair flexion, extension and adduction, but no abduction; walks very well, but with eversion of foot, 1½in. shortening, stands firmly and able to hop on excised limb *
Fluctuation above and behind great trochanter, pains	*Excision*, subperiosteal, antiseptic, maintained, longitudinal incision, synovial membrane dissected out, chloride of zinc solution applied	Epiphysis loosened, cartilage of epiphysis softened	C.		Healed in 5 weeks		Dec. 1879. Remains healed, movement free; total illness 1 year and 8 mths.
Fluctuation in groin and below anterior superior spine of ilium, pains	*Excision*, subperiosteal, antiseptic maintained, longitudinal incision, synovial membrane dissected out, chloride of zinc solution applied	Epiphysis loosened, epiphysal cartilage gone, abscess and sequestra in neck below epiphysis	C.		About 6 weeks or less		Do. Movements free

An asterisk at the end of the remarks in the last column indicate

Number and Year	Dates. Admission, Operation, and Discharge	Name	Age, Sex, and Side	Duration before Admission	Cause	Early Symptoms	Condition on Admission	Treatment in Hospital before Operation
43 1879	Ad. May 2 Op. July 19	ELIZABETH HARVEY	10 F R	3 weeks	No history of injury		Child thin, countenance anxious, rigidity of muscles about hip, much pain on any attempt at movement, thigh flexed, also knee, starting pains at night	Long outside splint, bracketed, antiseptic incision into abscess and joint, double Thomas's splint
44 1879	Ad. April 24 Op. Sep. 10	PAT GREGORY	2 M R	3 mths.	Fall down stairs	Pain in hip, limping	Rigidity of hip muscles; much pain on attempt at movement, no shortening, pains spasmodic	For 4½ mths., modified Thomas's splint, extension by weight
45 1879	Ad. Nov. 14 1879 Op. Nov. 22 1879	ELIZA LARGE	9 F R	12 mths.	Fall; no history of consumption	Limping	Muscular rigidity, pains spasmodic, swelling, fluctuation, deformity, flexion, tilting, no shortening	Had had 3 months' previous treatment in Hospital and 1 mth. at home, in splints, modified double Thomas's splint

TABLE—*Continued.*

hat the case has been examined by the Sub-Committee on Hip Disease.

Condition shortly before Operation	Operation	Disease found at Operation	Result		After Operation	Cause of Death	Remarks
			Cured	Died			
Antiseptic treatment had broken down, swelling and increased fluctuation, bed and splint sores; very ill	*Excision*, subperiosteal, double Thomas's splint afterwards	Necrosis of epiphysis of femur, *acute necrosis of epiphysis*	Progress good. Dec. 1879, under treatment in Hospital				*Note.*—Died Jan. 4, 1880, from hæmorrhage after exploratory operation, perforation of acetabulum and pelvic abscess
Fluctuation and abscess below anterior superior spine of ilium; pains	*Excision*, subperiosteal, antiseptic, longitudinal incision, synovial membrane dissected out, solution of chloride of zinc applied	Synovitis hyperplastica; epiphysis loosened, cartilage destroyed	Under treatment				July 188C, nearly well
Abscess rapidly increasing, pains severe	*Excision*, subperiosteal, antiseptic	Necrosis in acetabulum, ostitis of head of femur	Under treatment				July 1880, nearly well

TABLE OF DEATHS.

No. in General Table	Name and Year	Age	State before Operation. Remarks	Nature of Disease for which Operation was performed	Survived	Cause of Death
1	HERBERT WELLS 1865	8	*Sinus* remained *open*. Disease had been in progress for several years	Subarticular caries. No necrosis. Chronic panarthritis; caries	2 years	Waxy liver and kidneys, albuminuria, caries of acetab., cough, &c.
2	PAT RILEY 1865	7	Operated on late; disease going on 3 years. *Sinus open* before operation.	Subarticular caries. No necrosis. Chronic panarthritis; caries	6 months	Tubercular disease, waxy liver, &c.
4	WILLIAM SCARBOROUGH 1872	5	Operated on late; disease 3 years. Dislocation. *Sinuses open before operation*	Chronic panarthritis. Chronic synovitis hyperplastica granulosa; caries	10 months and 15 days after excision	Erysipelas, suppuration in knee, amputation at hip-joint, waxy liver and kidneys
5	LEWIS SCOTCHER 1872	6	Not so long a case. No sinus.	Panarthritis. Synovitis hyperpl. tuberculosa. No necrosis, but caries	2½ months after excision	Died of general tubercular disease
8	ELLEN HOATH 1873	11	Hectic at time of operation. *Sinus after abscess.*	Chronic panarthritis (necrotic). Perforation of acetabulum. Abscess in pelvis	7 days	Septicæmia; a case of rapid tuberculosis (?)
11	DANIEL DALEY 1874	7	Sinuses remained open (in 1877). *Abscess opened before operation, and sinus ensued.* Disease in progress 2 years	Chronic panarthritis. Ostitis. Caries. Sequestra from pubes and ischium. All articular structures had disappeared.	4 years. Excised May 1874, died April 24, 1878	Wasting, waxy liver, kidneys, spleen, &c.

13	Charles Boyton 1874	4½	No sinus	Chronic panarthritis. Synovitis hyperplastica granulosa	11 days	Diphtheria unconnected with operation
14	Emily Michie 1875	6	One year's disease before operation. Had spinal disease. *Abscess open before* operation.	Chronic panarthritis (necrotic). Perforation of acetab. All articular structures had disappeared	4 years	Died of tubercular disease. Pott's curvature. *Cough.* Hip movable, and she was able to walk about easily. *Scar* of sinus reopened fo a short time occasionally
15	William H. Duff 1875	7	Diseased 4 years before excision. *Sinus open before* operation	Chronic panarthritis. Synovitis hyperplastica granulosa. Caries. All articular structures had disappeared	16 days	Thrombosis of femoral vein and asthenia
16	Eliza L. Fiddler 1875–6	5¾	Disease in progress 18 months before excision. Had scarlet fever and albuminuria in Hospital. No sinus	Chronic panarthritis. Synovitis hyperplastica tuberculosa	111 days (4 months)	Died of tubercular meningitis
17	Henry Day 1876	5	Operation 15 months after first symptoms—12 months after admission. *Abscess opened before* operation	Chronic panarthritis (necrotic). Perforation of acetabulum.	2½ years	Waxy disease of liver, kidneys, &c. Sinus open
20	Albert Allen 1876	12	About 10 months ill before operation. Had had excision of opposite knee-joint. No sinus	Chronic panarthritis. (necrotic). Acetabular perforation	About 2 years and 1 month	Sudden inflammation of membranes of brain. Sinuses open.
22	Henry Grant 1877	6	More than 6 months before admission (? much more). No sinus	Chronic panarthritis (necrotic). Acetabular perforation. Pelvic abscess	15th day	Pyæmia. March 1877

TABLE OF DEATHS—*Continued.*

No. in General Table	Name and Year	Age	State before Operation. Remarks	Nature of Disease for which Operation was performed	Survived	Cause of Death
24	WILLIAM BROOKS 1877	11	Diseased some years before operation. *Sinuses before operation*	Chronic panarthritis (necrotic), femoral	20th day	Pyæmia. May 1877
26	FREDERICK LIDDIARD 1877	5	Also spinal curvature. *Sinus open.* Diseased hip for 7 months	Chronic panarthritis (necrotic), femoral	About 1 year and 6 months	Tubercular. Large tubercle in cerebellum. Waxy kidneys, &c.
34	ERNEST INGRAM 1878	17	Scrofulous. 5 months ill before excision. Abscess opened before operation. *Sinus open*; foul. Hectic	Chronic panarthritis. Synovitis hyperplastica tuberculosa. Caries only of bone	10 or 11 days	Pyæmia, caries of lumbar vertebræ, and sacrum. Psoas abscess, scrofulous abscess in neck

SUMMARY.

Causes of Death.

1 Diphtheria.
1 Thrombosis of femoral vein, asthenia.
3 Pyæmia.
1 Septicæmia.
1 Tubercular meningitis, or diseased brain, without waxy changes in liver, &c.
7 Tubercular disease, with waxy disease of liver, &c.
1 Tubercular disease of lungs and other bones than pelvic.
1 Waxy disease of liver, &c., suppuration in knee; amputation at hip-joint.

16

5 Preventable diseases (viz. diphtheria 1, septicæmia 1, pyæmia 3), spread over 14 years.
1 Asthenia; thrombosis
9 Tubercular disease.
1 Waxy disease; suppuration in knee; amputation at hip.

16

State of Joint before Operation.

11 Sinus open in.	Necrotic . . . 7
5 Perforation of acetabulum	Synovial . . . 9
5 No sinus.	16

TABLE OF CASES CURED.

Numerical Number	Name	Age, Sex, and Side	Disease	Operation	Date of Operation	Cure	How soon after Operation	Total Illness	Present State of Joint, Dec. 1879, and Remarks
1	CHARLES BOSWELL	7 M R	Synovitis hyperpl. necrosis of acetab. and perforation — Chronic panarthritis (necrotic)	Excision, subperiosteal	Nov. 22, 1871, 8 years ago	C.	Discharged 7 months and 3 weeks after. Sound 4 months after, *i.e.* 1 year after operation	1 year and 9 months	Slight flexion and extension. Can walk five miles. Can stand on the leg firmly. Can hop on this leg. Two inches shortening.
2	ALBERT EDWARD CURRY	3 M L	Chronic panarthritis (synovial) — Chronic synov. hyperplastica granulosa. Caries	Excision, head of femur	Feb. 12, 1873, 6 years and 10 months ago	C.	Discharged 3 months and 3 weeks after		Good flexion and extension. Can stand on leg without support.
3	ELIZA BRIARS	8 F R	Chronic panarthritis (synovial) — Synov. hyperplastica granulosa. Caries	Excision, subperiosteal	March 28, 1873, 6 years and 9 months ago	C.	Discharged 2 months and 18 days after	20 months and 18 days	Stiff joint. Had disease of both hip-joints. Both stiff.
4	THOMAS CAMPBELL	7 M R	Chronic panarthritis (synovial) — Synov. hyperpl. granulosa. Caries subchondral	Excision, subperiosteal	Feb. 4, 1874, 5 years and 10 months ago	C.	Discharged nearly 4 months after	About 1 year	Can run about and walk miles.

TABLE OF CASES CURED—*Continued.*

Numerical Number	Name	Age, Sex, and Side	Disease	Operation	Date of Operation	Cure	How soon after Operation	Total Illness	Present State of Joint, Dec. 1879, and Remarks
5	EDWARD GOODMAN	12 M L	Chronic panarthritis (necrotic) ——— Chronic panarthritis, necrosis of acetabulum. *Perforation*	Excision, subperiosteal	April 4, 1874, 5 years and 8 months ago	C.	Discharged nearly 5 months after. Sound Nov. 1876	Less than 4 years	Movable, very free. Flexion and extension. Abduction and adduction good. Does not stand very well on excised side. Six inches shortening.
6	THOMAS TAYLOR	4 to 5 M R	Chronic panarthritis (synovial) ——— Synov. hyperpl. granulosa. Caries subchondral.	Excision, subperiosteal	Jan. 25, 1875, 4 years and 11 months ago	C.	Discharged 4 months and 3 weeks after. Sound Dec. 1878	Less than $4\frac{1}{2}$ years	Movable joint. Flexion and extension slight.
7	ELIZABETH HEARN	5 F R	Chronic panarthritis (synovial) ——— Synov. hyperpl. granulosa. Epiphysis loosened	Excision, subperiosteal	Dec. 15, 1875, 4 years ago	C.	Discharged 6 months and 2 weeks after. Healed June 1879, $3\frac{1}{2}$ years after operation	Less than 5 years	Can walk half a mile. Flexion and extension excellent, to right angle. Abduction and adduction. Eversion and inversion slight. Can stand on this leg. Shortening, $2\frac{1}{8}$ inch.

8	Margaret MacCarthy	12 to 13 F R	Chronic osteomyelitis femoral. Caries of acetabulum — Chronic panarthritis	Excision, subperiosteal. Y-shaped incision	March 15, 1876, 3 years and 9 months ago	C.	Discharged 2 months and 1 week after. Quite sound Jan. 1879	Less than 3 years and 8 months	Movable joint. Flexion and extension good. Can stand firmly on this leg. Shortening $3\frac{1}{2}$ inches.
9	Sarah Ivory	8 F L	Chronic panarthritis (? synovial) — *All* articular structures had *disappeared*	Excision, subperiosteal	Feb. 10, 1877, 2 years and 10 months ago	C.	Discharged 5 months and 3 weeks after	About $6\frac{1}{2}$ years	Slight movement. Can walk freely.
10	Alice Hooper	4 F R	Chronic panarthritis (synovial) — Synov. hyperpl. granulosa. Caries, femoral. Loosening of epiphysis	Excision, subperiosteal	May 5, 1877, 2 years and 7 months ago	C.	Discharged 3 months and 1 week after. Healed June 1879, 2 years and 1 month after operation		Dec. 1879. Movable joint. Flexion and extension slight. Walks freely.
11	Charles Henry Ferris	4 M L	Chronic panarthritis (synovial) — Synov. hyperplastica granulosa. Ostitis, femoral	Excision, top of femur only. Y-shaped incision	May 16, 1877, 2 years and 7 months ago	C.	Discharged 5 months and 2 weeks after. Quite sound Nov. 28, 1879	Less than 3 years	Flexion and extension good. Dec. 1879, Impaired by fall and sprain. Five-eighths of inch shortening.
12	Thomas Jones	8 M L	Chronic panarthritis (necrotic) — Ostitis of acetabulum. Necrosis. *Perforation*	Excision	Jan. 30, 1878, Nearly 2 years ago	C.	Discharged 3 months and 2 weeks after	Less than 6 years	Dec. 1879. No movement.

TABLE OF CASES CURED—*Continued.*

Numerical Number	Name	Age, Sex, and Side	Disease	Operation	Date of Operation	Cure	How soon after Operation	Total Illness	Present State of Joint, Dec. 1879, and Remarks
13	HENRY J. EDWARDS	7 M R	Chronic panarthritis (synovial) ——— Synov. hyperplastica granulosa. Caries, femoral and acetabular	Excision, subperiosteal. Y-shaped incision	Feb. 20, 1878, 1 year and 10 months ago	C.	Discharged 2 months and 2 weeks after. Soundly healed, June 21, 4 months after	2 years and 8 months	To school for last 12 months. Shortening 2 inches. Movable joint. Flexion and extension fair. Adduction. Can stand on the leg without support.
14	HECTOR WEBB	9 M L	Chronic panarthritis (synovial) ——— Synov. hyperpl. granulosa. Abscess under epiphysis	Excision, subperiosteal. Partly antiseptic. Y-shaped incision	March 6, 1878, 1 year and 9 months ago	C.	Discharged 2 months and 5 days after. Sound, Jan. 31, 1879, 11 months after	5 months	Movable joint. Excellent movement in all directions. Can stand firmly on the leg. Shortening, 3 inches.
15	HENRY EURIDGE	6 M R	Chronic panarthritis (synovial) ——— Synov. hyperplastica granulosa. Caries, femur; abscess in neck	Excision, subperiosteal. Partly antiseptic. Y-shaped incision	March 6, 1878, 1 year and 9 months ago	C.	Discharged nearly 3 months after. Quite sound, Nov. 1, 8 months after	Less than 2 years and 8 months	Movable joint. Flexion and extension.

16	Thomas J. Knowles	9 M L	Peracute panarthritis (necrotic) ——— Acute ostitis, femoral, necrosis of epiphysis	Excision, subperiosteal. Antiseptic	March 20, 1879, 9 months ago	C.	Discharged 2 months and 5 days after	3 months	Movable joint. Very fair flexion, extension, and adduction. Can stand and hop on this leg. Walks well. Shortening, 1½ inches.
17	Ada Gunter	4 F L	Chronic panarthritis (ostitis, necrotic) ——— Chronic Synov. hyperpl. Ostitis, femoral. Loosening of epiphysis	Excision, subperiosteal. Antiseptic	May 17, 1879, 7 months ago	C.		1 year and 8 months	Movable joint excellent.
18	Ada Gunter	4 F R	Chronic panarthritis (ostitis, necrotic) ——— Sequestra in neck below epiphysis	Excision, subperiosteal. Antiseptic.	June 7, 1879, 6 months ago	C.			Movable joint excellent.

Summary of the above Eighteen Cases of Cure.

12 Chronic panarthritis, commencing in synovial membrane.
6 Chronic panarthritis, commencing in ostitis and ending in more or less necrosis.
15 Operations were subperiosteal.
5 Operations were by a Y-shaped incision.
13 Operations were by the longitudinal incision.
3 Operations were performed antiseptically.
2 Operations were performed partly antiseptically.

6 Cases had had abscess incised, and sinus persisted, but in 2 only were the sinuses chronic.
3 Cases had perforation of acetabulum, viz., No. 3, Boswell; No. 10, Goodman; No. 29, Thomas Jones.
13 Cases had been under treatment in Hospital from 2 days to 3 months.
4 Cases had been under treatment in Hospital from 3 months to 6 months.
1 Case had been under treatment in Hospital for 11 months.

Movable joints, sixteen certainly.

XIX.—*On a New Method of Excising the Hip-joint, together with some General Remarks on the Pathology and Treatment of Hip Disease.* By Robert William Parker. *Read December* 12, 1879.

In the discussion which took place, at the last meeting of the Society, on Mr. Croft's paper on Excision of the Hip, I stated that in five out of seven or eight cases in which I had excised the joint I had found the epiphysis of the head of the bone loose as a sequestrum within the acetabulum. In answer to some remarks by Mr. Hulke and Mr. Bryant, and in accordance with a suggestion made by our President, I now beg to lay before the Society brief notes of the cases, and I shall then offer a few general remarks on the subject of hip disease and its treatment.

Case I.

M. Y., æt. 8 years, admitted into the East London Hospital for children in March 1879. The following notes were taken by Mr. R. E. R. Morse:—'For two or three weeks she has complained of acute pain in the knee and right leg generally, and has been kept in bed; she was feverish and lost appetite. On admission the upper part of the thigh and region of the hip were found much swollen and very painful. There was no appreciable fluctuation; the soft parts in the groin were slightly œdematous; no enlargement of glands. Passive movements caused pain.' Extension was ordered. About a fortnight after her admission she was examined under chloroform, because her general condition was rather worse than on her admission. The femur moved freely; there was no grating in the joint; no fluctuation or deep-seated abscess was found. Temperature very variable. She does not take her food, and is decidedly weaker than on her admission.

A typhoid condition rapidly supervened, and for a while she was really very low and ill. In May—six or seven weeks after admission—her general health had somewhat improved, but an abscess had formed on the upper part of the thigh, and this was opened.

At the end of this month, nearly eleven weeks after her

admission, she was again chloroformed. Considerable grating was now felt within the joint, and I therefore decided to excise the head of the bone.

Operation.—For this purpose I made an incision about 3 inches long from the anterior superior spine of the ilium downwards along the anterior border of the great trochanter, cutting between the sartorius and rectus muscles on the inner side and the tensor vaginæ femoris and smaller glutei muscles on the outer side. I found the capsule already freely opened, and the carious neck of the bone exposed. In attempting to rotate the limb outwards the remains of the neck of the bone cracked off. The epiphysis of the head was ossified and loose—it was partially eroded and necrosed.

The child made a slow recovery. She gradually lost all pain, and began to gain flesh. On August 6 she was sent into the country.

I saw her a fortnight ago. She was comparatively fat and well. There are still some open sinuses. She can partially flex her thigh on to the abdomen; this does not cause pain. There is shortening of the limb.

The case is remarkable for the rapidly destructive changes in the joint, which, unless the history, as given by the mother, is incorrect, do not seem to have lasted more than thirteen or fourteen weeks at most.

I have purposely made the notes of this case—which is still incomplete—very short, but I shall hope to show the girl at a subsequent meeting of the Society.

Case II.

J. A., æt. 6 years, a delicate child. He has suffered from corneitis at various times. Was admitted, under the care of my colleague Mr. Reeves, in May 1878, with a swelling on the upper and outer part of the thigh. This was incised, and a large quantity of pus let out. There had been no local injury, but some three weeks before admission he had received an insignificant blow on the ankle, on account of which he was kept in the house for a few days. Although his general health improved after the evacuation of the abscesses, still the local condition progressed. On August 20 (about eleven weeks after his admission), during Mr. Reeves' absence from town, I examined the boy under chloroform, and found grating in the joint, and the great trochanter much above Nélaton's test line. On August 30 I excised the joint by

the usual posterior incision. I extract from my case-book the following note :—

'On everting and dislocating the femur an epiphysial head was found loose and detached; this was removed, and also a portion of the neck. The great trochanter was in part separated from the shaft, but this was not removed.'

This boy is now well, and walks about easily; he wears a high boot.

Case III.

J. B., æt. 14 years, came under care on June 5, 1879. Three weeks before admission there had formed a large swelling in the upper part of the left thigh, which was painful. During this time he had had night-sweatings and flushings, with diarrhœa. When first admitted I could not detect any implication of the hip-joint, although I examined it carefully. The abscess was a very large one, and involved the upper half of the thigh, appearing to surround the femur. The pus was evacuated, and several drainage tubes put in. The boy continued to have a hectic appearance and temperature, and he lost flesh very rapidly. At the end of a month the hip-joint was obviously affected, the femur being displaced upwards and backwards. He was chloroformed, to allow of a more detailed examination, and the displacement of the femur upwards was verified. The edge of the acetabulum was found to be bare. The upper third of the femur, at least, was involved in the disease. As a retrospective opinion I would say that I think amputation at the joint would now have afforded the best chance of recovery. As it was he continued to get worse; there seemed no attempt at repair as regards the bones, nor any inclination on the part of the abscess cavity to close. At the end of September, fourteen weeks after his admission, and as a last resource, I again explored the parts under chloroform. I now found that the upper third of the femur had been entirely destroyed by the carious process; there was a very large abscess cavity, lined with a highly vascular pyogenic membrane, and the soft parts around were much destroyed. I therefore removed the limb by a Lister's oval incision. After its removal I found the head of the femur, fully ossified, loose and necrosed in the acetabulum; it was whole, and was not eroded. The boy died of exhaustion on the following day.

Case IV.

Eliza E., æt. 3 years, admitted February 7, 1879. Operation

May 9, 1879. She had a fall three weeks before admission. A week later the right thigh became swollen, with much pain in the hip. Temperature 100° on admission. Any attempt to flex the joint caused great pain. Extension was applied and the recumbent position strictly enjoined. A month later an exploratory incision was made (and pus let out) on the outer side of the great trochanter. Early in April, two months after admission, she contracted measles. On May 9 the joint was excised, grating in the joint having been previously detected. The epiphysis of the head was loose and detached in the acetabulum. The greater part of the neck of the bone was removed, leaving the great trochanter and its muscles. The child now slowly but steadily improved, and in July was sent to the Convalescent Home. At the present time the sinuses have not quite closed; she cannot yet walk. She looks fat and well.

Case V.

T. A., æt. 7 years, was admitted on September 12, 1879. There was no family history of phthisis. Four years ago—he was then only three years of age—his mother noticed that he 'walked lame.' On inquiring she was told that he had been kicked by a pony. He was shortly afterwards taken to a hospital, and rest was enjoined. Six months later he had starting pains in the joint at night, and was an in-patient at the London Hospital for seven weeks, without getting any permanent benefit. This pain and limping have continued on and off ever since—better for a few weeks, then worse again. He now came under my care, and was put to bed, extension in the recumbent position being ordered. There was pain in the joint, with muscular fixation, but no other objective signs. During the subsequent six weeks his disease continued to get worse; a fulness in the groin occurred, and fluctuation soon became very manifest.

November 25.—He was chloroformed. On finding grating, the joint was excised. On making the antero-lateral incision the capsule was easily exposed. It was not much destroyed in front; there was a collection of pus, which seemed to have escaped from the hinder part of the capsule. The neck of the bone was sawn off internal to the capsular attachment; the neck was carious, and broke into pieces when I attempted to remove it. On examining the acetabulum I found the remains of the head loosely held by what, I presume, was the round ligament. The edges of the cavity

were also carious. The operation was done antiseptically, and the boy is progressing.

The following additional case has occurred to me since the last meeting of the Society.

Case VI.

Charles T., æt. 5, admitted August 8, 1879. Operation December 5, 1879. The disease began sixteen months ago.

This boy has been kept in the recumbent position, and has worn a weight for four months. He has not improved, and during the past two weeks an abscess developed in Scarpa's triangle. He had reflex bladder and rectum troubles.

I found the remains of the head of the bone at the bottom of the acetabulum, as in the preceding case.

I would now ask permission to offer a few general remarks on the subject of hip disease and its treatment:—

1. On the methods of operating at present in use.
2. On the pathology of the disease, with especial reference to epiphysial sequestra.
3. The social condition of the patient and its bearings on the treatment to be pursued.
4. Results of the disease:—(*a*) without adequate treatment; (*b*) with expectant treatment; (*c*) after operative treatment.

On the methods of operating.—Various incisions have from time to time been suggested; but, with one or two exceptions, the joint has always been opened from behind.

A long array of surgeons, from White of Manchester, in 1769, downwards to the present time, would have to be quoted as advocates of this practice; and I fear, therefore, that it would be considered a bold statement on my part if I were to express my own belief that any incision which opens the hip-joint from behind is a little unsurgical as an operation, for it must necessarily cut across a large mass of very important muscles; and, furthermore, it must interfere largely with the vascular anastomoses about the trochanter as well as the joint. Thus, the three glutei, the pyriformis, obturator internus, quadratus femoris, and possibly some fibres of the adductor magnus, will be divided.

There are, no doubt, cases in which considerable changes have taken place in the position of the head of the bone, such as may render the posterior incision the more desirable; but in a considerable proportion of the cases the posterior operation—never a very easy one—is not particularly indicated. Then, again, the usual plan, after the capsule has been opened, of forcibly wrenching the bone out of the acetabulum seems to me likely to complicate the original disease. I have several times seen the upper part of the femur bared of its periosteum by the manipulation which has been necessary to make it project from the wound for the purpose of sawing off its diseased extremity. I believe such forcible handling of diseased structures on all other occasions is contrary to the teachings of our best surgical authorities.

Operation.—I now propose an antero-lateral incision, and would recommend that by means of a keyhole-saw the diseased bone be sawn off *in situ*, or after a very slight degree of external rotation. This antero-lateral incision extends from the anterior superior spine of the ilium downwards and forwards to the anterior border of the great trochanter. It enters between the tensor vaginæ femoris and the two smaller glutei muscles on the outside, and the sartorius and rectus on the inside, by which means a large patch of the anterior capsule is exposed. If the capsule is not already opened by the disease it may be incised with a blunt-pointed curved bistoury, parallel with and rather internal to the anterior inter-trochanteric line. A keyhole-saw is then introduced, and the neck of the bone is cut through and removed with sequestrum forceps.

The great trochanter in children, in my experience, is not often diseased, and under such circumstances may be left, together with the muscles which are attached to it.

A drainage tube is introduced and the wound closed. Manifestly some care must be exercised to see that the discharges do not bag, for the deepest part of the wound is below the level of the external incision.

Professor Roser* of Marburg has advocated an anterior method of excising the joint. He made a transverse incision along the neck of the bone, beginning just outside the anterior crural nerve, and carrying it outwards to the root of the great trochanter. In this way he cuts directly across the tensor fasciæ, the sartorius, rectus, and iliacus muscles.

* *Chirurgisch-anatomisches Vademecum.* 4th edit. Stuttgart, 1870.

The late Professor Simon of Heidelberg also described an anterior incision in the 'Deutsche Klinik' for 1866. In a case of punctured wound of the joint with suppuration and subsequent caries, utilising the wound, he made an incision internal to and parallel with the crural vessels; the incision was about three inches long: it extended somewhat above Poupart's ligament. He says the operation was an easy one, owing to the position of the head of the bone on the inner edge of the acetabulum. His patient died on the third day, of exhaustion, septicæmia, and colliquative diarrhœa. Simon states that this case suggested to him the desirability of an anterior incision. He accordingly made some attempts on the dead body, and finally concluded that the posterior incision was the best, especially in cases of dislocation. No particulars are given. In criticising Roser's method he believes that the joint is more easily reached by this anterior incision than by the posterior one, when dislocation has *not* taken place. He would convert the linear incision of Roser into a ⅂-shaped one by cutting from its inner extremity parallel with the anterior crural nerve, thinking that the joint would then be reached more easily.

Maissonneuve also, I believe, has advocated an anterior incision, but I have not seen his description of this plan of operating.

Though I do not venture to believe that the mode of operation is of first consequence, yet in a discussion on operative interference in hip disease I do think that it should be brought forward, especially as the final results of excision still leave much to be desired.

Epiphysial sequestra.—Most authors refer to cases of this kind, and several instances of the sort have recently been communicated to me. In Mr. Croft's case, related at our last meeting, this pathological condition was found in both joints.

At the last meeting of the Society I referred to seven cases of excision of the hip in which I had found an epiphysial sequestrum. I ought to have said six excisions, and one amputation at the hip, for advanced hip disease. In five of these seven cases the epiphysis of the head of the femur was more or less loose, and was found in the acetabulum after the neck of the bone had been removed. In three of these the epiphysis, or what remained of it, was ossified and necrosed. In one other the disease was less advanced: the cartilage was not quite gone. In the fifth case I am unable to state its exact condition, as I have lost the specimen. Seeing how

often it had occurred in my own limited practice, I must confess that I was not aware that it was such an unusual occurrence as Mr. Hulke and Mr. Bryant pointed out. Mr. Hutchinson's experience was also in favour of its comparative rarity; and on referring to Mr. Holmes's 'Surgical Diseases of Children' I found that he too regards it as uncommon. I am, nevertheless, under the impression that I have seen them pretty often, and I have frequently heard the subject spoken of by others. I was pleased to hear Mr. Bryant, Mr. Hulke, and also Mr. Marsh refer to the great frequency of caries as the pathological condition in these hip cases, for I think that this view justifies the frequency of epiphysial necrosis. It is not strange that caries of the neck of the bone, by disturbing the nutrition of the epiphysis, should lead to its death and exfoliation. I should be inclined to think that it is often loose, and becomes altogether absorbed in the interval which elapses between its being shed and the operation by which it would otherwise be removed.

After thinking over my cases I have arranged the following features as common to all the cases, or to the majority:—

Clinical.—Progressive disease, in spite of perfect rest in the recumbent position, in hospital, with extension applied for an average period of three months. Comparatively short duration of the antecedent symptoms; the early formation of abscesses; the early age of the patients respectively, 8, 6, 14, 3, 7, and 5 years old.

Pathological.—In all cases extensive caries of the neck of the bone; epiphysial necrosis and detachment; destruction of the capsule; absence of any great displacement of the femur (owing to the sustained extension which had been practised); free suppuration.

The social condition of the patients.—It is generally admitted that continued rest and change of air—especially sea air—suffice for the cure of hip-joint disease, and it is probably no exaggeration to say that nine-tenths of the total cases would recover completely with such treatment, could it be carried out. I am afraid, however, this doctrine has done much to perpetuate the evil it would eradicate; for it is a great misfortune that hip disease is common in proportion as its subjects are unable to get the only treatment that can stay its progress. And yet circumstances have compelled all of us to recommend this treatment, when we were well aware that it could not be efficiently carried out. Personally I believe it is simply impossible for the child of a

poor labouring man to receive adequate treatment at home. It is equally true that only a small percentage of the total cases can be treated in existing hospitals, and thus a large number of cases are unavoidably condemned to what inevitably follows when the disease is neglected, viz. years of suffering, with the certainty of a crippled limb, even though life be preserved.

Results of the Disease.—(*a*) When not adequately treated; (*b*) when treated in hospital by the expectant method; (*c*) when treated by operation.

(*a*) When not adequately treated.—I have already referred to these results: by common consent they are most unsatisfactory.

(*b*) What, on the other hand, are the results of expectant treatment in hospitals?—Speaking for myself, I would only advance the cases which I have referred to this evening. There are eight cases; in each the patient was in a children's hospital, where everything that good nursing could do was done, and yet all the cases tended rapidly to get worse. I could produce many other cases, if it were desirable, where the disease has tended to progress—many more, I regret to say, than where it has been cured (of course I refer to cases of pronounced disease, and to such as have been ill enough to be admitted as in-patients). Of the cases which, having been treated in various hospitals and discharged as 'cured' or 'relieved,' I should very much like to know the final result. How many have been followed up, say, for a year after their discharge? This unsatisfactory result has led me to question whether our commonest method of treatment —the recumbent position, with leg extended—is the best. A considerable number of cases of anchylosis at the hip-joint present themselves in the different hospitals. The femur, in these cases, is anchylosed at an angle with the pelvis; and I would ask the Society whether this natural cure, taking place in the flexed position, is not possibly a clinical indication which it might be well to follow? For we know the value of absolute rest—mechanical and physiological—in the cure of disease; and we also know that the most perfect rest for the limbs is obtained by a slight degree of flexion. Therefore I would like to ask the Society whether we could produce as many cases of 'cure' of advanced disease with a straight limb as can be produced with the limb anchylosed, more or less at an angle with the pelvis?

(*c*) *When treated by operation.*—I am quite willing to ad-

mit that the published results of excision of the hip-joint, although they contain some brilliant cases, which may well serve as models of what *may be* attained, are, nevertheless, not very encouraging, It may be, and indeed it probably is, due to our putting off the operation so long that a successful result is all but impossible.

To wait until our patients are reduced in health and strength, until the muscles and limb have wasted to a mere outline, until the disease has disorganised the joint and spread into surrounding structures, until secondary changes in distant organs have been set up by long-continued suppuration, as is so often the case in hip-joint disease, is, it seems to me, quite sufficient to account for the very imperfect results which have so far been obtained by our operative procedure.

As a basis, therefore, for discussion I would submit the following proposition for the consideration of the Society:—

An exploratory incision should be made into joints when the disease has continued to progress in spite of treatment by rest in a hospital for upwards of three months.

This incision may be undertaken earlier, if there are obvious signs of distension within the joint, or if there be grating. The desirability of excising or not could then be settled.

XX.—*Case of Excision of the Hip-Joint in an Adult two years after the Operation.* By H. A. Lediard, M.D. *Exhibited December* 12, 1879.

SAMUEL B., æt. 35, hawker, was admitted into the Central London Sick Asylum, in Cleveland Street, on March 7, 1877.

He stated that he met with an accident in August 1871, whilst at Aldershot, and that he broke his left forearm and injured the right hip, but recovered sufficiently well to undergo two annual trainings in the Militia subsequently; but the pain in the hip recommenced in 1874, and he was treated in an infirmary for incipient disease of the hip-joint. He had a long splint applied for nine weeks, and at the end of that time he went out on crutches. In October 1875 an abscess formed near the joint, and he was under my care for some months, during which time the abscess was aspirated over the great trochanter. A sinus formed, con-

tinued to discharge for three months, and then dried up. He then went out, but returned a short time after with the abscess again discharging. I may say at once that all the usual signs of disease of the hip-joint were present, but the patient had not the cachectic appearance often associated with it.

On measurement of the limb, in March 1877, there was shortening to one inch. He further stated that he had borne no weight on the limb for three years. In June he was put under chloroform, and an incision was made over the joint. Cartilaginous grating of the joint was felt during manipulation, but no dead bone was found. This proceeding gave full vent for all discharge, and as long as the wound kept fairly open he was much relieved; but the pain returned, and appeared to be more localized than formerly. Here, then, was a man who had been a sufferer and a cripple for three years, and apparently there was no prospect of his being cured. Rest was ineffectual, and no sequestrum could be reached; the only hopeful sign was that the patient's general health, though impaired, was not destroyed. I put the state of matters to him, and he readily agreed to have the hip excised. Accordingly, on September 4, the patient was again chloroformed, and, with the kind assistance of Mr. R. W. Lyell, I proceeded to remove the upper end of the femur. By a free incision made over the posterior aspect of the joint the bone was quickly dislocated and sawn through below the great trochanter; the acetabulum was filled up with soft pulp, which was cleared out with the finger-nails, and then sponged clean. Extension by the weight and pulley was then applied. Examination of the bone removed showed that about three-fourths of the head of the femur were destroyed; the osseous tissue divided by the saw appeared somewhat too vascular; but with this exception the case promised to do well, seeing that the acetabulum was not actually diseased.

The tendency to shortening was obviated by increasing the shot in the bag from time to time, and a McIntyre splint was used in addition to keep the limb in good position; this was, however, taken away on October 3, and on the 25th the extension was also removed. On November 2 he sat up for the first time; by the end of November he could bear some weight on the limb, and during the following month he was provided with a high boot.

Subsequently a few spicules of bone separated at intervals,

keeping him in bed again, and on one occasion chloroform was given and an incision made to relieve some deep-seated matter. He was, however, discharged perfectly well in about twelve months after the operation, walking well with one crutch and a stick, bearing a fair weight on the limb, his general health being all that could be desired.

I had an opportunity of examining the hip in February last—*i.e.* seventeen months after operation—when the patient came to see me. The site of the operation was as sound as the day he left the infirmary, and had puckered very much; there was no pain of any kind or degree. He could walk a short distance without a stick, but preferred to have a crutch and stick, and with these he could go any distance, and was earning his own living. His general health was excellent.

Remarks.—The point of interest in this case seems to be the excellent recovery after an operation which is not much employed or recommended at present for disease of the hip-joint in adults. In children good results are constantly seen, but few adults have been recorded as operated on.

No doubt the success of the present case was due to the fact that the pelvis was free from disease, and that the operation was performed at a sufficiently early stage. Again, the disease having a distinctly traumatic cause rendered the case favourable in comparison with those in which there is a marked constitutional taint.

Note (taken December 5, 1879, being two years and a quarter after the operation).—General health of patient excellent; the body is well nourished; he has no cough; the right lower limb is about $1\frac{1}{2}$ inch shorter than the left, and is less muscular than the left, especially in the gluteal region. Walking is well performed with a crutch under left arm; a stick is not used now. The site of the operation is perfectly sound. Movements of the right hip can be very fairly performed; patient can raise the thigh to a right angle with the trunk, can cross the right thigh over the left when sitting or standing, and there is a fair amount of abduction. He is, however, unable to kneel. He gets about the house without either crutch or stick, but when out of doors always uses a crutch. For the last eighteen months he has been earning his own living.

The felt support for the thigh and pelvis given him on his discharge is still worn, and found useful, as well as the high-heeled boot.

XXI.—*A Case of Morphœa with Raised Patches arranged in the course of Nerves.* By H. Radcliffe Crocker. M.D. *Shown on December* 12, 1879.

SARAH J., æt. 17 years, attended at the East London Hospital for Women and Children on December 8th, having been sent to me by my colleague, Dr. Donkin.

She was pale, and subject to 'fainting,' remaining insensible for an hour sometimes, and in some of these 'faints' she had fallen downstairs; suffers from frequent headaches and pain on the left side; has menstruated, but never regularly; never had rheumatic fever; heart normal. About four years ago she noticed some spots on the flexor surface of the left wrist: several appeared at the same time, extending about half-way up the forearm. They were not more than $\frac{1}{8}$ inch in diameter, and they have gradually got larger by running one into another: fresh places are still appearing. Most of the patches are now distinctly raised above the normal skin, with a sharply defined border, but there is no vascularity around or in the neighbourhood, and the natural lines of the skin over them are unaltered; the patches can be pinched up as a whole, but not any part of them, and there is very decided thickening; two or three are slightly pigmented of a fawn-colour, but the rest are quite white. There is slightly less sensibility on the patches than round about them, and the patient thinks there is less strength in the affected arm. The patches are distributed as follows:—In the right second intercostal space and towards its inner border, 1 inch to the right of the median line, is a patch $\frac{1}{2}$ inch in diameter; in the second left space, on the same level, but 2 inches from the median line, is another; on the inner side of this, in the third space, is another; and in the same space are two spots $\frac{3}{4}$ inch in diameter apparently commencing, the skin looking a little yellower and feeling slightly thickened. In the axilla, at about the second and third spaces, is a group, some being $\frac{1}{4}$ inch, others irregular and $1\frac{1}{2}$ inch or more; running down rather to the back of the arm, towards the inner condyle, is an almost continuous chain of patches; and in the same direction, but rather more anterior, is another less marked series, beginning about 2 inches below the inner condyle

and reaching about two-thirds down the forearm. There are a few directly posterior on the upper arm for about 3 inches; another series, fewer and less prominent, begins 3 inches below the acromial process and goes straight down to a point 2 inches above and to the front of the outer condyle; at this point there is a patch 1 inch by $\frac{3}{4}$ inch, and the line is continued on to two-fifths of the forearm; between the outer and inner of these two lines is a third, beginning with small ones, $\frac{1}{4}$ inch in diameter, in the middle of the upper arm to the elbow, and from there to 1 inch above the hand; the lower patches are larger, irregular, and some pigmented.

The vaccination cicatrices are well-marked, with no morphœa. The extreme limits of size of the patches are $\frac{1}{4}$ inch and 2 inches.

Remarks.—The arrangement of the patches in the intercostal spaces and in lines down the limb affords a good illustration of nerve-influence in the distribution of the disease, a condition not very uncommon as regards the fifth nerve, but seldom seen or less obvious in other parts of the body. The marked elevation of the lesions and the absence of the usual vascular zone are also noteworthy features.

XXII.—*Report of the Committee on Chloral. Read January* 9, 1880.

THE Committee appointed by the Clinical Society to investigate 'what deleterious effects follow the prolonged and continuous use of chloral in ordinary doses' beg to present the result of their inquiry in the following report. Their first step was to draw up an explanatory circular and list of queries, nearly one thousand copies of which were issued to the profession, and the text of which, with an accompanying note of appeal, was published in the principal medical journals of the United Kingdom. A few months later a second request for material was made through the freely accorded medium of the medical press, and a considerable number of letters was written by the Acting Secretary and by other members of the Committee.

In all seventy special replies and printed papers were received, and a careful analysis of these has been made for the information of the Society. Twenty-nine answers state that, after extensive experience of chloral in long-continued mode-

rate doses, no ill effects have been observed. Of these correspondents ten—Dr. Herbert Major, Dr. Tate, Dr. Ward, Dr. Shute, Dr. Carr, Dr. Edgar Sheppard, Dr. Merrick, Mr. Finch, and Dr. Bacon—enjoy the special opportunities for observation afforded by asylum practice, and they have all used chloral freely and beneficially. Dr. Sheppard regards it as the most valuable hypnotic in the Pharmacopœia, and Dr. Major writes: 'In rare instances the possibility of the drug having retarded or prevented recovery in apparently favourable cases has been considered; but as under any treatment acute cases, with apparently favourable prognosis, occasionally pass into chronic and incurable insanity, the point is obviously most difficult to ascertain with certainty. In any case the number of instances in which the possibility of the untoward result indicated has suggested itself has been very few.'

Mr. Curgenven notes one case in which 15 grains were taken every night for seven years with good effect. Mr. Chaldecott supplies another, in which an old lady took 20 grains nightly for seven or eight years.

Dr. Theodore Williams mentions an interesting case where from 20 to 30 grains were taken every night for one year and nine months with marked good effect by a patient suffering with aortic regurgitant disease, in which cerebral symptoms had supervened.

Dr. Clifford Allbutt has used chloral freely and beneficially in heart disease, in a case of fatty heart, for three years nightly (20 to 25 grains), 'with great solace'; and in another case he believes its soothing influence to have saved an hereditarily disposed person from insanity.

Dr. W. Squire sums up his experience in ten interesting cases, in none of which any bad effect was observed to follow the prolonged use of chloral; and Dr. Buzzard furnishes a case in which chloral in 30-grain doses was taken without harm for nearly four years. He also relates another of a gentleman, æt. 62, who has taken from 25 to 30 grains of chloral nightly for eight years without ill effect.

Before proceeding to analyze the answers received from those who have observed inconvenient effects to follow the use of chloral, it may be well to clear the ground by a brief summary of what is already known and recorded on the subject.

It is obvious that acute poisoning by the drug is quite outside the scope of this inquiry, but moderate quantities,

taken at short intervals and for long periods, have been believed to be responsible for a considerable variety of painful and annoying symptoms which are said to have accompanied or followed its use. These have more especially attracted the attention of the profession in America, Dr. Bartholow devoting a paragraph in his work on Therapeutics to the 'chloral habit,' Dr. Mattinsin, of Brooklyn, N.Y., in a printed pamphlet sent to the Committee, giving much information; and Dr. Frank Woodbury, of Philadelphia, and Dr. Da Costa, of Pennsylvania, also sending printed communications.

The principal symptoms would seem to be these:—

'Cerebral anæmia' (Fothergill), with melancholia and impaired mental power; muscular prostration, more especially affecting the legs, causing staggering, and debility almost amounting to paraplegia, and believed to be spinal in origin. With this are occasionally associated peculiar pains encircling the joints above and below, and attended with great dryness of skin (Anstie); and several observers have noted a singular affection of the fingers, consisting of erythematous inflammation, followed by desquamation of cuticle, superficial ulceration about the edges of the nails, with great pain and tenderness to touch (Professor Smith, of Baltimore).

Cardiac debility is alleged to follow in some cases the prolonged use of chloral; and pharyngeal congestion, with a universally diffused red rash, has on one or two occasions excited a suspicion of scarlet fever. Other skin affections are also recorded, assuming either the form of spots of roseola, coalescing to form patches of erythema, or of deep flushing of the face and head, following the use of stimulants (Crichton Browne and Kirn). Or petechial and purpuric eruptions may appear (Cholmeley), and may even run into a species of pyæmic condition, in which ulceration of the gums and great prostration closely simulate scurvy, abscesses and deep ulcerations of the skin supervening, and even leading to a fatal result.

The experience of those who have observed inconvenient effects to follow the use of chloral may be summed up under the various headings of the Schedule.

A. Nervous system.—Dr. Inglis, of the Royal Edinburgh Asylum, in a reprint from the 'Edinburgh Medical Journal,' records a case of chloral-eating in which at last 180 grains were taken daily; followed, after seven years' indulgence, by grave perversion of the moral sense, epileptiform convul-

sions, great mental enfeeblement, and general nervous debility, necessitating asylum treatment, under which recovery took place. Dr. Woodbury mentions a case in which nightly doses of 20 to 30 grains, during four months, were followed by a violent attack resembling delirium tremens. Dr. Easton records the case of a lady who experienced ataxic symptoms, with numbness and burning sensations, following the nightly use of 30 to 40 grains of chloral hydrate during two years.

Dr. George Harley notes two cases in which 15- to 30-grain nightly doses, during from three to six months, were followed by the outbreak of acute mania in persons hereditarily predisposed to insanity.

Dr. Norman Kerr had a patient, æt. 86, in whom moderate doses (8 to 30 grains), continued for five weeks, caused drowsiness and marked mental enfeeblement.

Dr. Craig (Edinburgh) mentions the case of a young lady, æt. 24, who took 18 grains thrice daily for four years, with occasional intervals, and in whom great 'nervousness' resulted.

Dr. Thompson (Leamington) notes a case of 'chloral mania.'

Dr. Ashley, of Cattaraugus, New York, mentions a case in which a patient took from ʒj to ʒij daily for six years; in this instance convulsions were believed to follow its use, and delirium tremens its sudden stoppage.

Dr. Maudsley writes:—'The worst cases of insanity I have seen have been those in which 40 gr. or the like of chloral have been given three times a day. Red-edged eyelids, pallid shrivelled face, cowering shivering bodies, are the chronic results *me judice* of its use in asylums, or rather of its abuse, by being given day after day and night after night.'

Dr. Clouston is averse from its use in melancholia and hysterical women, as in these cases a craving speedily arises; and he has observed that insane patients fail to gain weight, that the brain with difficulty recovers its sleep function, the patients acquiring an exhausted, wearied look, with lessened appetite, and that in one case more decided insanity was developed under its use. In conclusion he is inclined to think that chloral should never be given in large doses continuously in any case of curable neurosis. Dr. Lindsay, of Perth Asylum, holds the prolonged use of chloral to be a species of systematic poisoning, being liable to beget morbid conditions more serious than those which the drug is intended to modify.

Dr. Langdon Down has observed mental deterioration to follow the use of chloral.

Mr. Spencer Watson notes great mental depression, with hysterical symptoms, to follow chloral (20 grains) given every night for some months. Dr. Gill believes chloral to have caused epileptiform fits in one case. Dr. Mickle, of Gore House Asylum, Bow, has observed an occasional increase of insomnia, restlessness, and loquacity.

Dr. Sharpin notes the case of a young lady whose nervous system was much affected by the regular use of chloral.

B. Circulatory system.—Dr. Langdon Down has observed failure of the left ventricle.

Dr. Barlow holds that in children, as in adults, 'there appears to be a risk of heart-failure, and that it is not possible to infer the safety of its administration for any length of time because the first few doses appear to be tolerated well.'

C. Digestive system.—Dr. Lloyd (Barmouth) mentions a case in which dyspepsia followed the use of chloral in endocarditis.

In a case reported by Dr. Althaus great digestive derangement was also noted.

Dr. Craig's patient also suffered from gastric disturbance.

Dr. Longhurst (*vide E*) noted a tonic dyspepsia, loss of appetite, and constipation.

Dr. Carroll, Staten Island (New York), mentions the case of a lady in whom epigastric tenderness, dry brown tongue, vomiting, and diarrhœa followed 30-grain nightly doses during two months.

Dr. Gill mentions a case of digestive disturbance caused by chloral.

Dr. Sharpin mentions two well-marked cases of deep flushing of the head and face following the use of food and stimulants.

D. Cutaneous.—Dr. James Thompson (Leamington) mentions the case of a female, æt. 44, who took chloral (grains 20) for three months, at the end of which period defective circulation of the hands was noted, with a line of ulceration round each nail.

Mr. Humphrey, of Aylesbury, sends a case of pompholyx produced by chloral.

Dr. Fothergill notes 'peripheral paralysis of arterioles,' with blueness of extremities.

Dr. Langdon Down has observed 'liability to the production of facial erysipelas.'

Dr. Russell describes the combined effects of chloral and alcohol in his own person to be beating of the carotids and intense redness and flushing of the face and scalp, and gives a similar case in his professional experience.

Dr. Buzzard mentions the case of a female, æt. 50, in whom a daily dose of 30 grains for two years was followed by the appearance of a large patch of papular efflorescence in the face, of a purplish red colour, the eruption ceasing when the drug was left off.

Mr. Walford, of Ramsgate, recalls a case of lichen produced by chloral. Both Dr. Buzzard and Dr. Langdon Down have observed lachrymation and conjunctival irritation.

Dr. Sharpin mentions the case of an elderly gentleman who was much annoyed by troublesome itching of the legs following the use of chloral; and reports another case in greater detail.

E. Urinary or other systems.—Dr. Longhurst mentions a case in which irritability, with subsequent temporary paralysis of the bladder, followed doses of from 10 to 20 grains for three or four months; and Mr. Orton, of Newcastle, believes that chloral causes congestion of the kidneys.

Inquiry amongst some of the leading druggists of the metropolis has not established the probability that there is any remarkable abuse by the public of the facilities which they enjoy for purchasing for themselves any quantity of chloral. The drug, it may be mentioned, is not included by the Legislature amongst those the sale of which is guarded by the name and address of the purchaser being required to be registered by the vendor.

In conclusion the Committee wish to express their regret that, in spite of their repeated appeals to individuals personally, and to the profession by circular and through the medical press, they have failed to obtain any more definite information than that contained in the preceding report; and, although the opinions expressed by gentlemen of experience will doubtless be received with the respect which is their due, the Committee would have been glad if more facts from which definite conclusions might have been drawn had been placed at their disposal.

William Jenner, M.D.
Dyce Duckworth, M.D.
Robert Farquharson, M.D.
Thomas Buzzard, M.D.
Thomas Barlow, M.D.

XXIII.—*A Case of Acute Rheumatism treated by Salicylic Acid, and terminating fatally.* By James F. Goodhart, M.D. *Read January* 9, 1880.

A GIRL, æt. 17, was admitted under my care into Guy's Hospital on February 19, 1878. She had been a servant for three years. There was a history of gout and rheumatism on the father's side. She had always been healthy, except that she suffered from nasal polypi, and had been three times operated on by Mr. Golding-Bird—the last time fourteen days before her fatal illness. She had had scarlatina long ago.

She described her present illness thus :—She was operated upon for the nasal polypi, and felt very faint and weak afterwards, but managed to work on for seven days. When getting up on the morning of the 17th of the month her ankles, knees, and hips were so stiff that she went to bed again. Her back, shoulders, and arms were soon in the same condition, and the joints began to swell in the order mentioned. She had no rigors or sweating, but headache and loss of appetite. She was treated for rheumatic fever, and got better, but relapsed in two days, and then came to Guy's Hospital.

She was a dark-complexioned girl, with flushed face and bright eyes. Her tongue was red at the edges, with a white fur on the dorsum; rather dry. The ankles, knees, wrists, and elbows were much swollen; the skin somewhat sodden-looking, and suffused by a pinkish blush. The phalangeal joints were also swollen, and all the joints immovable from pain.

The heart at this time is described thus: Præcordial dulness increased in extent. Apex beat normal. Slight pericardial rub at the base. Temperature at 2.20 P.M. 103°. Pulse 120.

She was ordered ½ drachm of bicarbonate of potash, with acetate of ammonia, every three hours, and 5 grains of Dover's powder night and morning. Her diet consisted of three pints of milk.

On February 20 the heart affection was more decided. The area of præcordial dulness was increased upwards to the

second intercostal space, across from the sternum to the nipple, and downwards to the sixth costal cartilage. The impulse was in its normal position, as far as could be ascertained. The sounds were very distant, and thick at the base. There was no bruit. The chest was normal. Urine 1021, not albuminous. She appeared to have a good deal of præcordial distress. She was sweating freely, and her joints were still very painful; and she moaned much till 3 A.M., becoming quieter afterwards. Her temperature had gradually fallen from 103° to 100°. I ordered her to continue her medicine; but at 6 P.M., as she still seemed in much pain and the temperature was rising again, though only a little (100·4°), the house physician ordered 15 grains of salicylic acid every three hours, in place of the alkaline mixture she had been taking. I saw her at 9 P.M., and though still in a good deal of pain and restless I did not apprehend any ill result, as there were no particularly serious indications.

However, after this the pulse rapidly increased in frequency, reaching 160, and she died quietly at 3.45 A.M. She had taken four doses of salicylic acid, 60 grains in all—the last dose three-quarters of an hour before her death. She had a restless moaning night, but did not seem unusually ill; and she was seen by the Sister of the ward and also by the house physician at midnight, and they neither of them saw then any change for the worse, nor did the nurse notice anything unusual till her death.

I made the post-mortem examination the same afternoon. The body was well nourished. The brain and its blood-vessels were quite healthy. The lungs were healthy. The heart weighed 9½ ounces. There was considerable ecchymosis upon the pericardium, and in several places there were patches of recent lymph. The muscular tissue of the ventricles showed one or two points of fatty degeneration, but I doubt if this was of any moment, as the ventricles were not dilated. The valves were practically all healthy. The mitral had a grain or two of lymph upon two points of its edge. The right ventricle was distended by clot of post-mortem formation, and the pulmonary artery also. The latter had some resemblance to an embolic clot from being double; but it was continuous with the clot in the ventricle and of the same appearance, and I was of opinion that it had all formed *in situ* and post mortem. The larger vessels and veins contained liquid blood. The stomach contained plenty of liquid food. The small intestine was much

congested and ecchymosed; the large intestine was healthy. The liver weighed 69 ounces; it was healthy; the spleen 5 ounces only; it was pale. Kidneys 11 ounces; healthy. All the joints contained abundant yellow synovia, with coagula of yellow lymph. The knees and hips were more particularly affected. All the bones were normal, special search being directed to the sphenoidal, ethmoidal, and frontal sinuses in the region of the recent operation.

When the patient was first admitted I was prepared, by her general appearance, her dry skin, and her restlessness, to find her doing badly, and I was afraid that hyperpyrexia might set in. With this prognosis in view the temperature was watched closely for some hours; but finding that it progressively fell, and that the ordinary rheumatic sweating became established, my fears subsided, and there was no longer any unusual feature about the case: it assumed the character of an ordinary attack of acute rheumatism of by no means severe type. It was, therefore, with some surprise that I heard at my next visit to the hospital that it had terminated fatally during the night, and the question which rose to my mind, and which I submit for discussion to-night, was this: is the result in any degree to be attributed to the salicylic acid treatment? I cannot help feeling that it may have been, but I am not here to press that opinion in the face of facts which must, I think, throw considerable doubt upon any answer we may give to the question, What was the cause of death? I will enumerate the several issues which seem to me to be suggested by the case. First, an early pericarditis was present, and the muscular tissue of the left ventricle was fatty in one or two parts; and it is possible that what, judged by the post-mortem appearance, was not a severe affection, may yet have been sufficient to determine the cessation of the heart's function in this particular case. Second, I think it may be suggested as just possible that between the time when she was last seen by the Sister of the ward and by our house physician and the time when she died, nearly four hours, the temperature may have risen rapidly, and death have ensued from hyperpyrexia. Third, the clot in the pulmonary artery presented unusual features, and I may have judged wrongly in setting aside the suggestion it offered of the existence of pulmonary embolism. With regard to the first I can only say that the pericarditis and muscular change in the heart did not seem to me to be sufficient to explain sudden death, and the absence of any

dilatation of the ventricle supports this conclusion. In the second place it seems very unlikely, from a consideration of the temperature chart, which is one of progressive fall, that hyperpyrexia set in afterwards. And, lastly, finding fluid blood in the great veins, and the clot in the pulmonary artery being continuous with that in the right heart, and of similar appearance, I am justified, I think, in rejecting the hypothesis of embolism. We have thus only to consider whether death was due to the rheumatic state or to the 60 grains of salicylic acid which had been administered, and in forming an opinion upon this point I am, I confess, influenced not so much by this particular case as by my previous experience. I quite admit that acute rheumatism is a very treacherous disease, especially in young adults; but before the introduction of the salicin and salicylic acid treatment my post-mortem experience led me to this conclusion—that death was brought about in some cases by hyperpyrexia without obvious tissue change, by pleuropneumonia, pulmonary œdema, and severe cardiac complications; in others occasionally, and comparatively rarely, by acute dilatation of the left ventricle. Since the introduction of salicin and salicylic acid I have seen three cases where death has been sudden, unexpected by the physician in charge, and where the post-mortem changes did not appear to me to be sufficient alone to explain the death. All three cases were young girls or women, and in all it was a first attack. Coming, as this case did, the last of three, and forming part of an experience which is new to me, I resolved to bring it forward for discussion as one, possibly, in which the salicylic acid had acted prejudicially, with a hitherto unrecognized rapidity. I do this more particularly, because the mode of death had no special symptoms attaching to it which pointed decidedly to the drug as the harmful agent, and under similar circumstances it is quite possible that death might result and be attributed wrongly to other causes.*

* I have not specifically discussed the question whether the case was one of septic poisoning after the operation for nasal polypi, because I think, notwithstanding that two gentlemen in discussing the case took this view, the facts revealed by post-mortem examination are entirely opposed to it. It is, I believe, to say the least, most unlikely that septicæmia would produce both synovitis and pericarditis, neither of them being suppurative. Septic inflammations of serous and synovial membranes are remarkable for the rapidity with which pus is formed. And even in the occasional cases of septicæmia attacking the heart, when this is not the case there is, so far as I have seen, a rapid liquefaction and localised softening of the muscular tissue, of which there was no trace in the present instance. I am, on the contrary, quite ready to adopt Dr. Bristow's alternative, supported as it was by two cases in point, viz. that the death was due to the rheumatic poison.

The actual death, I apprehend, must be attributed to sudden collapse and failure of the heart—symptoms known to be produced by salicin and its allies—and some such cases of sudden, though not fatal, collapse have already been observed and recorded by others, notably by Goltdammer, abroad—though in his case rather in association with a sudden fall of temperature—and by Dr. Hermann Weber, in the 10th volume of the Clinical Society's 'Transactions.' Both these writers enjoin caution in the size of the dose of the drug in cases where there is a failing heart or towards the end of an attack. But here, I would submit, is a case which gave no indication for caution; moreover, caution had never been overstepped, for a 15-grain dose of salicylic acid every three hours would be considered by many but a moderate one; so that the result, if I am correct in calling it so, could only have been averted, if at all, by commencing with a very small dose and gradually increasing it. Since the occurrence of this case I have adopted the latter plan, commencing with 5-grain doses. I cannot but think that in dealing with a drug which so quickly and so completely saturates the tissues, which in some cases—and one can never foretell when—produces severe nervous symptoms, in others sudden collapse, this is by far the wiser plan to adopt; and my present experience would lead me to think that in many cases the smaller doses are sufficient for the relief of pain.

XXIV.—*A Case characterized by Symptoms of Acute Rheumatism, which terminated fatally on the tenth day.*

By Thomas Buzzard, M.D. *Read January* 9, 1880.

On August 3, 1879, I saw, with Mr. Airey, of Notting Hill, Mrs. B., æt. 42, a widow. She was a well-formed and perfectly nourished person, who, I understood, was moderate in her habits, and had previously enjoyed excellent health.

I found her lying in bed, on her back, with a look of extreme distress in the face. Her tongue was dry and furred; the temperature 98·4°, the pulse 78, weak. In reply to questions she complained of 'queerness,' rather than pain, in the head, of noises in the ears, and of complete sleeplessness. She could not hear a watch close to the right ear, and the hearing in the left ear was impaired. She had constant nausea and aversion from food.

There was no paralysis—no diplopia. The ophthalmoscope showed no change in the fundus oculi. The heart-sounds and the breathing were normal. She had never suffered from otorrhæa, and the deafness had only existed since her present attack of illness began.

It appeared that on July 26 she had gone to the Opera, and had been exposed to a draught on coming out. Her impression is that she then took cold. On July 29 she felt quite well. The following day, when out of doors, she had been taken with shivering—what she could only describe as 'queerness' in her head and noises in the ears. She had since continued to be distressed and sleepless, and slight shivering had recurred daily. Her pulse, Mr. Airey told me, had at times been 56, at other times quicker. There was no albumen in the urine.

It was agreed that she should take milk and champagne, with some quinine in effervescent ammonia.

On August 5 I found that a remarkable change had taken place in her condition. Her pulse numbered 106, respirations 20, temperature 103° F. She lay on her back, with the face greatly flushed, erythematous, indeed, in the centre. Her left knee-joint was greatly swollen, and painful, and the limb powerless. She told me that her knee felt as if 'out of joint.' She had had much sweating. The aspect was altogether that of acute rheumatism. She was ordered to take 15 grains of salicylate of soda every three hours.

August 7.—The temperature was now 99°, the pulse 108, whilst the respirations numbered 38. Auscultation showed nothing abnormal in the heart-sounds. It was impossible to auscultate the back of the chest. Her left hand was swollen, or rather, to be accurate in detail, it was the first metacarpo-phalangeal joint, which was enlarged and painful on movement and to the touch. The swelling of the left knee had considerably decreased. The right knee, however, in the last twenty-four hours had become swollen and painful, so that now she could not move either leg or bear them to be moved by others.

She was very deaf—unable to hear a watch with either ear; a slight flush remained upon the face. The tongue was moist. Her manner was full of anxiety and distress.

We examined and questioned most carefully as to the existence of any wound or sore, but with a negative result, There was a blush of red on the hand, which appeared like a stain, and did not apparently consist of papules. The urine

was high-coloured and acid. That which had been passed the day previously remained acid. The patient did not exhale any marked sour odour, but the skin felt like the skin of rheumatic fever, and she had the look of helpless immobility which is characteristic of that disease. The bowels had not been relieved for two days. She was ordered a dose of castor-oil, and the salicylate of soda to be given every four hours, and then at still longer intervals. Brandy was to be administered in half-ounce doses every two hours, with egg and milk. An unfavourable prognosis was given, as the patient appeared likely to sink.

On the following day I received a telegram to say that she had died at 2.30 A.M. There was a little delirium towards the end. An autopsy was refused.

Remarks.—I saw this patient on three occasions. At my first visit the symptoms were exclusively cerebral in character. On the second occasion they pointed in the direction of acute rheumatism; but it was felt that the patient was quite as likely to be suffering from pyæmia. Our efforts, however, to discover any wound or sore which could throw light upon the mode of origin were fruitless. The absence of any external solution of continuity does not, of course, exclude pyæmia. I have seen it occur in one case where the source proved after death to be an ulcer of the intestine, and I have known it in more than one case occur in the sequel of the simple fracture of a bone. Although, therefore, in the present instance confirmatory evidence is wanting, I am myself disposed to believe that the case was one of pyæmia.

The patient, it will have been remarked, was treated for a short time with salicylate of soda. Of this she took, I think, about twelve doses of 15 grains each. I do not believe for a moment that the administration of this drug had any injurious influence. The case from the first was one which impressed me with the gravity as well as the obscurity of the symptoms.

XXV.—*A Case of Genu Valgum. With some Remarks on Subcutaneous Osteotomy.* By B. E. BRODHURST.

LUCY TAYLOR, æt. 17, was admitted into the Royal Orthopœdic Hospital, December 30, 1878, with very severe genu valgum, and talipes varus on the right side. Fig. 1 represents the deformity. The internal malleolus was $10\frac{1}{4}$ inches removed from the median line.

January 13, 1879.—The biceps tendon was divided, and one week later the external lateral ligament of the knee-joint and the ilio-tibial band. After three days a long thigh-splint, with a cogwheel on the outer side of the knee, and a Scarpa's shoe attached, was applied.

February 3.—Ether was administered, and the limb was somewhat extended. Afterwards gradual extension by means of the cogwheel was made day by day, without causing pain, and at the same time the talipes varus was overcome.

Fig. 1.

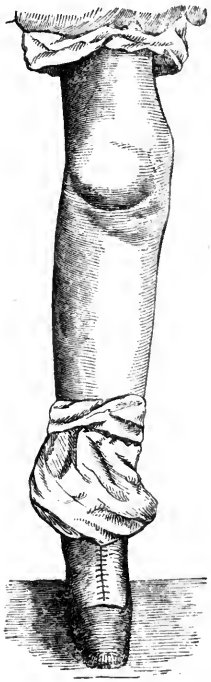


Fig. 2.

March 4.—The knee was found in a straight position. The splint was then removed, and a photograph was taken, from which fig. 2 is copied.

This is one of the most severe cases of genu valgum that I have ever met with. It was operated on at seventeen years

of age (the deformity having existed from the earliest childhood), without interfering with the bony structures, and in seven weeks the limb was straight, and strong enough to bear the weight of the body. There was also useful motion —flexion and extension at the knee.

It is supposed by some that in genu valgum there is, besides obliquity of the condyles of the femur, an absolute lengthening of the inner condyle, and wasting of the outer condyle; and that the inner condyle may in these cases be longer by half an inch, and even more than this, than in the normal condition. Various operations have been proposed to remedy this condition; and thus we have that of Dr. Ogston, of Dr. Macewen, of Mr. Barwell, and that known as subcutaneous extra-articular osteotomy, for genu valgum. These are all attended with some danger, such as inflammation and suppuration, with loss of joint-motion, and even with fatal results. Now these operations have become so frequent that one surgeon boasts of having performed sixty and upwards, and others count theirs by twenties and fifties. No one, however, has yet shown that this pathological condition, which is so vividly described, absolutely exists. Professor Billroth denies its existence. And, for my own part, I have never seen in these cases an increase of length of the inner condyle equal to half an inch beyond the normal condition, nor any increase approaching to this amount. I doubt if it ever occurs in youth; but it has never been shown to occur in the adult. I should be sorry to assert that the various operations on the bony structures to which I have alluded are unjustifiable in young persons, but they are serious operations, and are not unfrequently attended with unpleasant results. Besides, the deformity is not always removed by this operation, or it recurs, or a worse condition is set up by it, namely, genu extrorsum—examples of which I have seen. It is not many days since a case of this description was brought to me, when, after both inner condyles had been operated on, the inner malleoli remained nine inches apart.

I am unwilling to refer further to more serious injuries to the knee which have resulted from these operations, and of which during the last months I have become cognizant; but I desire to call the attention of the Society to the less hazardous operation, which I have above described, namely, that of division of the biceps tendon and the external lateral ligament. This operation enjoys the great advantage that it

has never been known to give rise to any ill effects, and it never fails to remove the deformity.

This patient was again shown at a meeting of the Society on January 9 of the present year. It was then seen that she could stand and walk without artificial support, and that the limb was straight and strong. There was still, however, somewhat more lateral motion than ought to exist, but it was due entirely to laxity of the internal lateral ligament. This, however, was diminishing. The structures which had been divided were well consolidated, and did not allow of any lateral motion so far as they are concerned. The sensation of the limb was normal, and had not been in the slightest degree affected by the operation.

XXVI.—*Case of Subastragaloid Dislocation.* By T. Pickering Pick. *Read January* 23, 1880.

ON the evening of October 18, 1876, I was summoned to see a gentleman who, I was informed, had fallen and injured his ankle. I learned the following facts:—That a short time previously, whilst standing on the roof of an outhouse, nailing some ivy to the wall above, the slates on the roof gave way and he fell through. In his descent he struck his left foot against a shelf, and, the foot remaining there, he swung round and twisted his ankle.

Upon examination of the case the injury was at once apparent. The foot was twisted so that its under surface looked almost directly outwards, and on the inner side, just below and in front of the internal malleolus, could be felt the prominent globular head of the astragalus, with the skin over it tightly stretched and tense. The relation of the astragalus to the internal malleolus was unaltered. Beneath this prominence was a concavity, the skin covering it was tense, along its upper border could be felt the rounded internal margin of the astragalus, where the inferior joins the internal surface of that bone. The os calcis projected much beyond the outer malleolus, beneath which was a remarkable depression. The lower extremity of the fibula formed an angle with the rest of the shaft of the bone, and there was well-marked crepitus, denoting a fracture of the bone in this situation.

The nature of the accident was thus perfectly evident: the os calcis and scaphoid had been displaced backwards

and outwards from the astragalus, the relation of this latter bone with the ankle joint remaining intact.

Under the influence of chloroform an attempt was at once made to reduce the dislocation by simple extension, with the knee flexed, but without the slightest effect: the foot continued in exactly the same position, and the relations of the os calcis to the astragalus remained unaltered. With the assistance of Mr. Henry Lee I now proceeded to divide the tendo Achilles about three inches above the heel, this spot being selected on account of the large amount of blood which was effused around the tendon near its insertion. As the peronei tendons seemed also to be tense I divided them behind the external malleolus. A prolonged attempt was now made, by manipulation, pressure, extension, and rotation to reduce the dislocation, and as much force as three of us could exert on the part was employed. The result of this second attempt was to bring the foot more into its natural position, so that the sole, instead of being turned outwards, was now directed downwards, but the relative position of the os calcis and astragalus remained unchanged, or nearly so, the astragalus, and with it the bones of the leg, projecting on the inner side of the os calcis. The skin over the prominent head of the astragalus was exceedingly thin and stretched, and the bone threatened every moment to burst its way through the integument. The whole of the soft structures around and for some distance up the leg were boggy from extravasated blood. Under these circumstances it was not deemed advisable to persevere further in the attempt at reduction, and the limb was placed in a junk splint; care being taken that the apparatus should not press on the skin over the prominent bone, by placing a circular pad of cotton-wool around it. He was injected subcutaneously with morphia.

On the following morning, October 19, it was found that the patient had been in intense pain all through the night, so that it had been necessary to keep him almost continuously, more or less, under the influence of chloroform. The pulse was 120; there was an anxious expression of countenance, and great pain was complained of. The extravasation of blood had now extended up to the knee, and the skin was tense and black. Over the prominent head of the astragalus the integument looked as if it must shortly give way.

October 21.– Two days later the patient was found to be still suffering considerably, and required chloroform occasionally to relieve the extreme pain. The position of parts was un-

changed, but the swelling and tension were somewhat less. A consultation with Sir James Paget, Mr. Prescott Hewett, Mr. Henry Lee, and Dr. Gage Brown was held, and it was determined that another attempt at reduction should be made; failing which, as the foot would clearly be of no use to him as it was, and the skin over the prominent head of the astragalus must of necessity give way, the operation of excision of the bone should be seriously considered.

The patient having been thoroughly anæsthetised, an attempt was made, by extension, to reduce the deformity. This entirely failed. At Mr. Henry Lee's suggestion the following plan was then adopted: a bandage was firmly fixed around the fore part of the foot, just behind the heads of the metatarsal bones. Mr. Lee, with the ends of this bandage tied over his shoulders, and with his knee in the concavity at the front of the ankle, pressing against the lower extremity of the bones of the leg, made extension in a direction forwards. At the same time, grasping the heel with my fingers, and with my thumbs firmly pressed on the head of the astragalus, I made lateral movement, turning the foot alternately inwards and outwards. In the course of a minute or so a slight motion backwards of the head of the astragalus took place, and in a moment it appeared to recede from under my fingers and the foot was restored to its normal shape.

The limb was now dressed antiseptically, placed in an Asselini's fracture-box, and swung in a Salter's cradle.

The subsequent history of the case was one of uninterrupted recovery as far as the leg was concerned; though the patient was much troubled with dyspeptic symptoms, which, however, yielded to careful dietary. A small superficial slough formed where the skin had been subjected to so much pressure by the head of the astragalus. This separated, leaving an ulcer, which rapidly healed, and ten weeks after the accident he was able to put his foot to the ground and to walk, with the aid of a high-heeled boot and iron support.

It is now three years since the accident, and our friend is able to carry on the practice of his profession without difficulty. There is the slightest perceptible limp, which would scarcely be noticed unless attention were drawn to it. He tells me that his leg gives him no inconvenience or pain, except, perhaps, after a hard day's shooting. On examination the contour of the foot is perfect. The muscles of the calf have never, however, recovered their fulness, and are

perceptibly smaller than those of the other leg, and the motions of the ankle-joint are somewhat restricted; on attempting to flex the foot on the leg it is found that there is a point beyond which this movement cannot be carried: the bones appear to come to a deadlock, and every effort to overcome this has failed.

Remarks.—The main interest in this case attaches to the way in which the reduction of the dislocation was effected and the satisfactory results which were obtained. Those surgeons who have paid much attention to the subject of dislocation of the astragalus must have been struck by the great difference there is in different cases as to the ease with which reduction can be effected. I have seen a dislocation of the astragalus which was reduced simply by slight extension, combined with pressure of the thumb on the projecting head of the bone, after the patient had been placed under chloroform. But, on the other hand, it must be confessed that in the majority of cases the very greatest difficulty is experienced, and in many instances the attempt has had to be abandoned, all efforts at reduction having failed. Of course there must be some reason for this. Probably in some instances it is due to the fact that one or other of the tibial tendons becomes displaced behind the head of the astragalus, and thus embraces the neck of the bone, and so forms a formidable impediment to reduction. I think the case I have just read suggests another cause of the difficulty, and the means which may be resorted to for overcoming it. It is that the sharp posterior margin of the astragalus becomes wedged in the fossa or groove between the articulating facets on the upper surface of the os calcis, and at the same time the under surface of the neck of the astragalus rests upon the sharp posterior margin of the scaphoid where the superior joins the posterior concave surface of that bone. Upon examining the dry bones it will be seen that the globular head of the astragalus terminates below in a very abrupt margin, where it is connected to the constricted neck, and that the articular surface extends to a much lower level, especially at the outer part, than the rest of the anterior portion of the bone; so that immediately behind the head there is a deep depression, bounded in front by the sharp margin of the articular surface. It will be noted also that the posterior superior margin of the scaphoid is particularly prominent, in consequence of the posterior surface of that bone being hollowed out into a deep concave fossa for the

reception of the head of the astragalus. It will be readily seen, then, that if the posterior margin of the astragalus be wedged in the groove between the articular facets on the upper surface of the calcis, and the constricted neck of the same bone be locked by the sharp posterior superior border of the scaphoid, it would constitute a very material obstacle to the return of the bone to its natural situation.

I am speaking now simply of subastragaloid dislocations (as they were first called, I believe, by Broca) where the whole of the tarsal bones, with the exception of the astragalus, are displaced outwards or inwards from this bone, which remains *in situ*, in contact with the tibia and fibula. In these cases the foot is not only displaced laterally but also backwards, and it is easy to understand, by an examination of the dry bones of the foot, how, if the rest of the tarsal bones are carried outwards and backwards from the astragalus, this bone becomes fixed in the manner I have attempted to describe. That this really does actually occur in some cases is proved by a preparation in the museum of St. George's Hospital, in which reduction could not be effected, and in which subsequent sloughing of the skin necessitated amputation. It was from taking this view of the case that Mr. Henry Lee suggested the plan of treatment which succeeded in effecting a reduction after all the prescribed modes of proceeding had entirely failed.

If the tibia is fixed by the surgeon's knee, the astragalus, which is connected with it, is also fixed. The other bones of the tarsus may then be drawn forwards; and the astragalus being freed from the position in which it is locked, by turning the foot alternately outwards and inwards the reduction of the dislocation is effected.

The success which attended this case would encourage us to believe that we have a simple and efficient means for reducing some of those cases of subastragaloid dislocations, where the bones of the tarsus are displaced backwards, by making extension forwards, and at the same time fixing the bones of the leg. The value of this forward extension is admirably shown in a case recorded by Mr. Hancock, where pressure of the surgeon's knee against the outer edge of the foot was tried, and extension was made with pulleys without success. Some days later an apparatus was made for the purpose of holding the foot firmly during the extension. The pulleys were now again applied and extension kept up for an hour and a quarter; no effect, however, was

produced until arrangements were made to draw the foot forwards and to press the tibia backwards, when the bones immediately returned into their places.

As far as I know this is the only case on record where forward traction has been employed, its object being to get the convex head of the astragalus to recede into the cup-shaped cavity on the posterior surface of the scaphoid, and it seems to me that it is a plan which should always be tried in these cases before more serious measures are contemplated; the simplicity of the mechanical means adopted, although not hitherto, I believe, suggested, being an additional argument in their favour.

XXVII.—*A Case of Gunshot Wound.* By E. Adam. Communicated by A. Hewan, M.D. *Read January 23, 1880.*

In 1862, A. B., a ship's carpenter, æt. about 37, a tall, stout man, of temperate habits, was shot by a ship's captain in a row on board a palm-oil trading ship at anchor in a river on the West Coast of Africa. The bullet was fired from a large Colt's revolver, at a distance of about five yards, at 10 p.m. Immediately the report was heard the carpenter gave a loud shriek, clasped his hands over his breast, and rushed across the deck into the forecastle, exclaiming, 'I'm shot; fetch the doctor.' I was standing close to the captain at the moment of the occurrence, and instantly followed the wounded man. He was lying on the floor of the forecastle deck, and as soon as he saw me said he was done for, and felt in a dying state. Collapse came on rapidly, although there was little or almost no external hæmorrhage. I made an examination of the chest, and found the entrance-wound of bullet above left nipple, between the third and fourth ribs. A bed was prepared on the main deck, and to this he was removed as soon as he had taken a dose of brandy and laudanum. The surgeon of a neighbouring vessel had meantime been sent for, and on his arrival I made a careful search for the bullet. It was found on the inner edge of the scapula at a point opposite to, but on a somewhat lower level than, the point of entrance, projecting under the skin of the back, which was extremely thick. There was a large patch of emphysema all round it, extending up to the level of the

shoulder-joint and towards the spine. As we turned the patient over he began to cough, and brought up a large quantity of blood, clear and frothy, and evidently from a pulmonary vessel. It was decided to remove the bullet, and this was done by means of a long incision, sufficient to admit two fingers. The operation was performed rapidly, and with little difficulty. A conical ball of lead, *grooved* at the tip, as if it had struck a hard substance in its passage, was extracted. The operation-wound was treated as a simple incised one, with one strapping. The wound of entrance was covered with cold-water dressing. There was grave collapse, but the patient was well watched, and *encouraged* by the *constant presence of the doctor.* During the first twenty-four hours brandy (with laudanum) was given pretty freely, but after this time very sparingly. The laudanum was continued for a week or ten days. It appeared to answer admirably, soothing the patient into a state of happy indifference and freedom from pain and anxiety. The blood from the lungs gradually diminished, there was scarcely any direct pain after the first day or two, and at the end of a fortnight the patient was in a condition of absolute safety. It should be noted that he was well fed with soup and mutton-tea, and was allowed to drink cold water freely. At the end of about six weeks he was transferred to a homeward-bound ship, and arrived safe and well in Liverpool. I heard of him three years later as being alive, well, and able to make long sea-voyages as well as any man. I offer no comment on this case further than to say that the treatment was the best that could be adopted under the circumstances. It was very rough, very unscientific, yet *very successful.*

XXVIII.—*A Case of Pyelitis. Discharge of Pus. Incision in the Loins. Recovery.* By S. O. Habershon, M.D., and N. Davies-Colley. *Read January* 23, 1880.

A. T., æt. 28, was admitted into Guy's Hospital, under Dr. Habershon's care, January 29, 1879. He was a delicate-looking man, by trade a carman; his mother and four brothers were stated to have died from phthisis. Four months before admission he first noticed blood in his urine, and he then experienced pain at the end of the penis during

micturition. For some time previously he had had pain in the left arm, left side, and thigh, extending down the inner part of the limb to the knee. The blood passed was mixed with the urine, and gave to it the appearance of light red port wine. He did not pass any clots. About a month after passing blood he noticed a swelling in his left loin, which increased till it reached the size of a goose's egg. The severity of the pain compelled him to remain in bed. He stated, that one night the swelling burst; that it suddenly disappeared; and that, he then passed about half a pint of pus with his urine, and continued passing a little pus at the end of micturition for three or four weeks; the urine was of a yellowish colour. During the formation of the swelling the bowels were confined for a fortnight, but afterwards diarrhœa came on. On admission, the patient appeared ill and distressed; his sleep was disturbed; he rested on his back, but movement gave pain; there was occasional nausea; the tongue was red and dry, the bowels regular; the abdomen was rigid, especially on the left side, and he complained of pain when the slightest pressure was made on the left loin; there was dulness on percussion in the left lumbar region from the eighth rib to the crest of the ilium, but the dulness did not reach to the middle line; there was also fulness at the part, but no defined tumour could be made out. The voice was weak, respiration harsh at the right apex; no dulness at the apices of the lungs, but there was dulness at the left base, and there was absence here of breath-sounds—respiration 36 per minute; the pulse was increased in frequency and feeble; the urine was clear, sp. gr. 1022, and free from pus, blood, albumen, sugar, and phosphates; it contained a few squamous epithelial casts. The evening temperature was 102°. Morphia was given to relieve the pain. It was thought desirable, from the distressed and feverish state of the patient, to relieve the lumbar swelling; the malady was regarded as disease of the pelvis of the left kidney, and was thought to be of a strumous character setting up suppuration, but it was doubtful whether there had been tubercular mischief at the commencement, and the symptoms did not indicate calculus. On February 8th a fine trochar and canula were introduced into the swelling through the left loin. Six ounces of a clear light green fluid were drawn off, and this was followed by about 2 oz. of pus. There was a fetid smell; the fluid was of sp. gr. 1025; when boiled it became nearly solid; it contained no urea nor

uric acid, no hydatid, but only pus cells and fibrine. On the 10th there was a good deal of perspiration, the dulness was less extensive, and there was less febrile excitement. On February 14th the temperature was high, the abdomen flaccid, and the tumour was distinctly felt. Mr. Davies-Colley made an incision under carbolic acid spray in the left loin, about 3 inches in length, just beyond the edge of the quadratus lumborum muscle; a firm thick-walled fluctuating tumour was found, pus having escaped, when a grooved needle was introduced. Mr. Colley made a larger opening, and nearly two pints of pus mixed with a little blood were discharged. The abscess extended beneath the ribs to about the eighth rib, and downwards about 2 inches below the crest of the ilium, forward to the edge of the rectus muscle; the walls of the sac were lined with calcareous material, but no calculus was felt. A tube 8 inches in length was introduced, and the wound dressed with gauze in the antiseptic manner. The fluid gave a slight effervescence with the hypobromite solution, but no crystals of nitrate of urea could be obtained by nitric acid. Quinine was continued. The improvement of the patient was uniform, the pain and perspiration ceased, and the discharge lessened. On February 27th, 3 inches of the drainage tube were removed; at the base of the left lung there was still slight bronchophony and prolonged expiratory murmur. On March 21st the patient was feverish, temperature 102°; the drainage tube had been removed, and the wound had healed; but Mr. Colley again opened the wound, and evacuated an ounce of pus.

From that time the patient continued to improve, the discharge gradually lessening, but he remained in the hospital till May 15th. The sinus was still kept open, and he was directed to come to the hospital every third day, to have the side dressed.

Remarks.—The family history and the appearance of this patient suggested the probability of tubercular disease or caseous degeneration, and the discharge of blood directed attention to the kidneys. It was less easy to give a decided opinion as to the cause of the hæmorrhage. The absence of thoracic disease removed passive congestion from among the causes of the complaint. There was no history of any blow or fall, and no proof of cancerous disease. The pain at the end of the penis and during micturition was indicative of vesical irritation as from a calculus, but these symptoms were only transient, and it was thought probable that, if any

portion of gravel had passed into the bladder, it had been quickly discharged. Two other modes of explanation suggested themselves to account for the hæmaturia and subsequent discharge of pus and enlargement of the kidney, for the swelling in the left loin was regarded, and correctly so, as a distended pelvis of the kidney; the one was that a calculus had blocked up the ureter, and had led to distention and suppuration in the pelvis of the kidney, and the other, that tubercular disease or caseous inflammation of the gland had been followed by chronic suppurative pyelitis. The roughened semi-calcareous state of the diseased pelvis of the kidney when the finger was passed in through the incision showed, that this latter supposition was probably correct; and no calculus could be felt. The patient was very ill on admission; he was feverish and in constant pain and distress; there was hectic, and his strength was rapidly failing; and nothing could be more marked than the relief and almost daily improvement after the free evacuation had been made by Mr. Davies-Colley. If the operation had been postponed I have no doubt the man would soon have become exhausted; and the operation might, I believe, be more frequently resorted to in these cases with benefit, and with the saving of life. It would have been well, if the whole gland could have been safely removed, for it had become the mere cyst of a chronic abscess, and it formed a persistent source of irritation. From the large size of the abscess, it may be doubted whether the suppuration was not external to the gland, but it is well known that the pelvis of the kidney may attain to enormous proportions. Some years ago a man was under my care in the Hospital who from the age of sixteen or seventeen had suffered from periodic discharges of pus from the bladder; the discharge of pus being preceded by the formation of a large projecting sac extending from the ribs to the iliac fossa on the right side. It was found after death that a calculus had blocked up the ureter on the right side, and that pus had collected in the distended pelvis of the kidney so as to attain to several pints in quantity. When the distention became excessive there was a sudden discharge, and the swelling subsided, for the distention of the ureter having become greater than the obstructing calculus, the passage was then free. These attacks recurred, sometimes at intervals of several years, and the patient lived to the age of 64 years. He died in Guy's from cancerous disease at the upper part of the remains of the kidney on that side.

Mr. N. Davies-Colley.—I have but little to add to Dr. Habershon's report. The character of the abscess-cavity seemed to me to indicate that it was formed by the dilated pelvis of the kidney. It consisted of a number of smooth-walled compartments, freely communicating with each other, and partially separated by ridges, which were, most of them, encrusted with a calcareous deposit. With the exception of a short period, during which pyrexia returned from the too early removal of the tube, the patient's progress to recovery was steady. He wore the tube for a month after he left the Hospital, on May 15. The discharge at first increased, probably from the discontinuance of the antiseptic treatment. It then gradually diminished, and finally ceased altogether at the end of October. His general health was good, but he had to be careful about his diet. Meat made him sick, so that he lived chiefly upon bread and milk. On November 5, when I last saw him, the wound had been quite healed for two weeks, and there were no signs of any abdominal tumour, although I examined him carefully in the recumbent posture.

XXIX.—*A Case of Chylous Urine, after Ague in India. Albuminuria. Cessation of Chylous Urine, with the development of Glycosuria and Polyuria.* By S. O. Habershon, M.D. *Read January* 23, 1880.

Eliza McC., æt. 59, was in India from the age of two years till she was forty; then, after a stay of two years in England, returned to India for ten years more. She had had twelve children, being married when about fifteen years of age, and at sixteen years of age she had her first attack of ague, and afterwards had repeated attacks before she left India. For three years she had noticed her urine to be white like milk, and very thick; this condition continued till admission into Guy's Hospital, on July 12th, 1876. Her ankles and legs became swollen during the day. For three months her sight had failed, and objects appeared misty. The patient appeared healthy; there was no evidence of disease of the lungs or heart, nor in the abdomen could anything abnormal be detected, except that the liver could be felt two inches below the ribs; the tongue was red and dry, the appetite good; there was great thirst. The urine had sp. gr. of 1025; it was milky in appearance, and it contained both albumen and sugar. Opium and quinine were given. On

July 18th it was found that the urine which was passed before breakfast was lighter in colour, but that passed afterwards was opaque and milky; the quantity was nearly five pints. She was placed on the restricted diet for diabetic patients, and gluten bread was given. The urine remained milky, but the sugar lessened, and on July 28th and 31st was absent. On August 2nd the urine was still milky, and was described as in 'lumps like jelly.'

On August 7th the quantity of urine passed was 4 pints 12 oz., but it was free from sugar. Various specimens of urine and of her blood were examined for filariæ, but none were found. When allowed ordinary diet the sugar returned. On August 23rd the urine passed before breakfast was quite clear, and free from sugar, though it contained a small quantity of albumen; but that during the rest of the day was milky, and became gelatinous on standing. On September 20th there was no sugar in the urine, its sp. gr. 1020; but the sugar returned after the allowance of ordinary bread. On October 10th Mr. Higgens found opacity of the lenses, and on the 17th performed iridectomy on the left eye. November 11th the urine passed after breakfast became clear; 15th it was clear, of sp. gr. 1012, free from albumen, but contained sugar. About 4½ pints of urine were passed during the day. When the ordinary bread was allowed the sugar increased; and on November 23rd the sp. gr. was only 1010, but the urine still contained sugar. On December 2nd she passed 9 pints of urine in the twenty-four hours, clear and pale, sp. gr. 1010; it was free from albumen, but contained sugar. On the 19th 8½ pints of urine, sp. gr. 1014; contained 242 grains of sugar. On January 6th, 10 pints of urine were passed, of sp. gr. 1008, and a small quantity of sugar was present. The tincture of iron was prescribed, and afterwards ammonia with laudanum. During the whole of January the urine was about the same, clear, 8 to 10 pints in quantity, sp. gr. 1010 to 1012, and it contained sugar. On January 27th there were 1,800 grains of sugar found.

On February 5th she passed 9 pints, sp. gr. 1010, and after fermentation the sp. gr. was 1006, or about 730 grains of sugar. She remained in the Hospital till February 21st; her general health had improved, the chylous urine had ceased, the albumen had also disappeared, but the urine continued of low sp. gr., and it contained sugar. On February 17th it was 9 pints, of sp. gr. 1014.

Remarks.—This case was one of chylous or lymphous urine, for there was spontaneous coagulation, but it was asso-

ciated with glycosuria. Albumen soon disappeared, but the sugar remained; at first the sugar ceased when the diet was restricted, but it afterwards became more decided and permanent. Search was made many times for filariæ, but none could be detected in the blood after careful microscopical examination. In recorded cases of chylous urine the condition has been referred to change in some of the lymphatic vessels connected with the kidney; but its association in this instance with glycosuria suggested the idea that both conditions—the presence of chyle and of sugar in the urine—might be referred to change in the liver. Of the hepatic disease there was no positive proof, and the connection with the liver must be regarded as conjectural—at any rate, as regards the chylous state.

XXX.—*A Case of Traumatic Salivary Fistula. Treated by passing a fine catgut bougie from the mouth along Stenson's Duct. Recovery.* By Henry Morris. *Read February* 13, 1880.

JOHN A., a shoemaker, was admitted into the Middlesex Hospital on June 24, 1879. He had been drinking with other men of his craft in a public-house, when a dispute on trade politics arose between him and a non-unionist. Hard words led up to harder blows, and in their encounter the non-unionist stabbed A. in several places with a shoemaker's knife.

On admission the patient was bleeding from a wound in the right occipital region, and from another nearly vertical in direction, and about 2 inches long, on the right cheek. There were, besides, other superficial wounds on the right arm and left forearm. The wounds were at once dressed by Mr. James, the house surgeon, and the man was admitted into the male accident ward.

All went well, and on June 28 the patient was reported to me as fit to leave; but before discharging him I made an examination of the injured parts, and found all the wounds healed except a small portion of the scalp incision and a narrow sinus at the lower end of the cut in the face. From the latter a clear fluid, obviously saliva, was trickling. The patient now stated that since the assault the right side of his mouth had felt very hot and dry, and that he was con-

tinually moistening it by conveying with his tongue the water from the right side over to the left side of his mouth. It was quite evident from these symptoms, and from the position of the wound, that the parotid duct had been injured; but, as the mucous surface of the cheek had not been penetrated, it was hoped that part at least of the circumference of the duct might have escaped, and that a fine probe or bougie could be pushed along it as far as the gland from the natural orifice of Stenson's duct in the cheek; for I thought that by thus maintaining the patency of the canal a constant flow of saliva alongside of the bougie would be kept up until the fistula had closed. A fine catgut bougie was, therefore, inserted from the mouth and urged gently onwards; but instead of following the course of the duct beyond the line of the wound its point emerged at the fistula. As the man was very sensitive to pain a little chloroform was given, the newly-healed part of the wound laid open, and the proximal end of the salivary duct searched for. It was found, after squeezing the parotid gland until a little saliva oozed from it, at the lower part of the wound. Into it the point of the bougie was inserted and pushed towards the parotid gland for about half an inch. This done the edges of the wound were brought together by three harelip pins and twisted sutures, and the bougie cut short, so that a short end, not long enough to be caught between the molar teeth, was left protruding into the mouth from the slit-like orifice of the duct.

The next day (June 29) there was still a slight flow of saliva from the lower extremity of the facial wound; but the patient felt the two sides of his mouth exactly the same, and could distinctly appreciate the trickling of fluid into his mouth by the side of the bougie.

June 30.—The upper part of the wound had quite healed again, but a little pus-stained saliva flowed from its lower end. The bougie was moved slightly backwards and forwards in the duct.

July 4.—The end of the bougie could no longer be seen; the patient said he missed it in the night, and thought it must have worked out into his mouth. It was certainly no longer in the duct. The two sides of his mouth feel to him the same, both as to coolness and moisture. Cotton-wool and collodion were applied over the lower end of the face wound, as a little saliva still escaped from it.

9.—A little saliva was escaping, both when eating and

speaking, through the anterior hole left after the removal of the lowest harelip pin. Cotton-wool and collodion were, therefore, applied over this also.

15.—The dressing was quite dry, and the patient was sure that no saliva had escaped on to the face for twenty-four hours. The cotton-wool and collodion were, therefore, discontinued; but the patient was retained in hospital until July 19, when, as all continued quite well, he was discharged cured.

Remarks.—Possibly it may be thought that the simplicity of this case almost places it beneath the attention of the Clinical Society; but, as salivary fistulæ are amongst the most annoying consequences of wounds of the face, I thought I would venture to bring it forward. It might have been supposed, from the complete cessation of the flow of saliva into the affected side of the mouth, that the distal part of the parotid duct had become quite closed; and, therefore, that an artificial communication between the mouth and the proximal end of the duct would have to be established, after the method of Desault, or by some modification of it. The facility, however, with which in this case a bougie was passed along the duct through its oral aperture encourages one to hope that the same may be done in many cases in which, at first sight, it appears—either from the length of time the fistula has existed or from all the saliva escaping through the fistulous opening—that this plan would be impracticable.

In all cases of salivary fistula it seems to me desirable to make an attempt to re-establish the natural channel for the saliva. By salivary fistula I mean, of course, a fistula of the parotid duct, as distinct from a fistulous communication with the parotid gland itself, such as occasionally follows abscess below or behind the ear; and also as distinct from an opening into the cavity of the mouth such as sometimes occurs after necrosis and cancer of the jaw.

This attempt may be made in one of three ways—either (1) by introducing the bougie from the mouth into the orifice of the duct or (2) from the fistula, after enlarging it, if need be; or (3) by making a small incision through the mucous membrane of the mouth at the spot where the parotid duct naturally opens. The orifice of the duct is its smallest part, and after long disuse may become closed; but its position is usually distinctly indicated by a slight elevation of the mucous membrane. If this be punctured the dilated part of the duct, which as it pierces the buccinator

muscle is the size of a crowquill, will be reached, and then the bougie might be successfully passed along it towards the gland, and the treatment completed, as in the above case.

In operations for the removal of tumours of the face, when an incision must be made so as to divide the duct, it would be well to pass a parotid bougie whilst the patient is still under chloroform, so that the patency of the duct and the flow of saliva might be secured during and after the healing of the wound.

XXXI.—*A Case of Sutural Union of the Median Nerve in the lower part of the Forearm five Weeks after its Division by a broken glass Bottle, followed by Return of Function.* By J. W. Hulke. *Read February* 13, 1880.

On June 14, 1879, a bottle-washer, by the bursting of a Seltzer's water-bottle, received a deep gash across the lower part of the flexor side of the right forearm, dividing several tendons, the median nerve, and the radial artery, and laying bare the pronator quadratus muscle.

He was brought directly to the surgery of the Middlesex Hospital, where the bleeding was stopped by twisting the ends of the severed artery; the external wound was closed with sutures, and the limb was fixed, with the wrist flexed, on a splint. He was then made an in-patient. On the following day, when I first saw him and learned the nature of his injuries, immediate union appeared to be taking place, which made me reluctant to open the wound, and I decided to wait, in the hope that the ends of the severed nerve might be in line, not far asunder, and that they would unite without surgical interference. It should be mentioned that the division of the nerve, reported as having been seen in the fresh wound, was confirmed by the perfect insensibility of the surface corresponding to the distribution of the nerve below the wound.

The expectation of immediate union of the wound was not realized. Suppuration ensued; cicatrization progressed very slowly, and was not completed before the second week in July.

On the 23rd of this month, the wound being completely healed, and anæsthesia continuing, although sufficient time

had elapsed since the injury for union of the nerve, had it occurred, to have manifested itself by some return of function, it was thought better to intervene. Ether was given. An Esmarch's bandage was put on. The two ends of the severed nerve were found by dissection, and connected by four fine sutures passed through the sheath. The upper end, bulbously swollen, was bedded in a mass of scar-tissue under the flexor sublimis digitorum muscle. The lower end had retracted under the annular ligament, from beneath which it was drawn out; it tapered to a blunt point. The two ends were separated by an interval of $\frac{2}{4}$ inch, and this was increased by about $\frac{1}{8}$ inch removed from each end in order to obtain two fresh plane surfaces at 90° to the long axis of the nerve. By drawing down the upper end and flexing the hand and forearm it became practicable to bring the two ends into contact. The hand, forearm, and arm were fixed on an angular splint contrived by our house surgeon, Mr. Hartley. At the end of a week, having to leave town, my colleague, Mr. Clark, watched the further progress of the case for me. After three weeks passive movement of the wrist-joint was cautiously begun, and on August 15 the boy became an out-patient. A note made at this date states that he has sensibility in all the parts before numb, except the two distal phalanges of the index and middle fingers, in which latter he says he has a creeping sensation. On the 20th of the same month the angular splint was replaced by a straight one; September 12th, sensibility was found to have returned in the second phalanx of the index finger; and on the 16th the only parts still unable to perceive the contact of a blunt point lightly pressed on the surface were the terminal phalanx of the index and the terminal and middle phalanges of the middle finger.

Remarks.—With such a degree of restoration of nerve function in so short a time we may reasonably look for further improvement. The operation has not only been successful as regards the union of the nerve, but it has afforded a hint in the direction of similarly joining severed tendons when these have failed to unite through the accidental interposition of other structures between their ends, or when they have been dragged out of line by shrinking scars, or when each end has become separately fixed to bone. Before the operation on the nerve the long flexors were almost functionless as regards the fingers; in the dissection their severed ends were found separated by a long interval, and fixed by

scar. The dissection for finding the nerve, which was imbedded amongst them, necessarily in some measure set free the tendons, and the subsequent flexed posture of the hand and forearm favoured their joining. That this in some degree occurred is shown by the returning mobility of the fingers, which augurs well for the recovery of a useful hand.

Having brought the subject before the Society so recently as last session, I will add nothing more to the above narrative than the remark that the case shows the propriety of securing divided nerve trunks in exact apposition by sutures in fresh wounds. Had this been done immediately it cannot be doubted that a better result would have been obtained.

XXXII. — *A Case of Exfoliation and Suppuration of the Nails, of uncertain origin.* By ALFRED SANGSTER, M.B. *Read February* 13, 1880.

ELIZA K., æt. 7, came under observation at Charing Cross Hospital October 16, 1879. Her mother, who accompanied her, was healthy-looking. She had had seven children. The first two were said to have died in infancy of 'chest complaint.' The third had lumps in the throat, and attended St. Thomas's Hospital, where they were painted with iodine. The fourth died when two months old with lumps in the throat; this child was said to have snuffled, and to have had a thick discharge from the nostrils, so that it could scarcely suck the breast. The fifth, living now, has had lumps in the throat. The sixth is the patient; and the seventh and last is living, and said to be healthy. The patient, a delicate-looking little girl, was brought to the hospital for the peculiar affection of the nails about to be described, and ulcerative stomatitis.

The terminal phalanx of the middle finger of the left hand was about twice its natural size, but red and very painful, so that the child held the finger with the other hand in a vertical position, to prevent its being jarred; the nail was greenish-black, curved talon-wise, and raised from its bed, from which oozed a very fetid, purulent discharge; the skin in the immediate neighbourhood was ulcerating. The other nails showed changes such as may be seen in the accompanying drawing; some were ridged transversely, and discoloured at the distal portions, others were stunted and misshapen, evidently new nails. Some were separated from

their beds, half-way towards the posterior nail-fold. A piece of paper could be slipped beneath these, showing that there was no heaping up of epidermic scales between the nail and its bed. The separated portion of nail was blackened with dirt, but its texture appeared unchanged. The toe-nails had been stunted and misshapen for some time; none had suppurated. The mother's account varied in detail from time to time, but the following general statement is probably reliable. The child's finger-nails presented no unusual appearance until twelve months ago, when certain of those on the right hand gradually turned black—that is to say, they became separated from their beds and discolored by dirt; when the blackened portion reached the posterior nail-fold, suppuration took place, the nail being ultimately shed and replaced by a new one. Three or four nails of the left hand underwent similar changes, but no symmetry as to the nails affected could be traced. Appearances were in favour of the correctness of the above statement—one nail was suppurating when the patient came under notice, and there were others in which the nail was separated from its bed; no fungus was found.

Remarks.—The disease will probably be accepted as diathetic, although the cause is obscure. Syphilis of course suggests itself, but there was no evidence obtained, either direct or indirect, excepting the mother's statement of snuffling in one of the children (other children were seen, but not the father). Mr. Waren Tay kindly examined the patient's eyes for me, but with a negative result.

The next cause to be thought of is the dartrous tendency (*i.e.* liability to eczema, psoriaris, &c.). Here again the evidence is entirely negative. Mr. Hutchinson, who has written upon the affections of the nails of dartrous origin, lays stress upon the symmetry of the disease and the heaping up of epidermis between the nail and its bed. The only case I have been able to find resembling that reported is one mentioned by Mr. Hutchinson in his article upon dartrous affections of the nails ('Lectures on Clinical Surgery,' Vol. I. Part 1): 'Some of the nails were scarcely thickened, but simply opaque and non-adherent to the bed. There was a space between the nail and its bed into which a slip of paper might be passed for a considerable distance. Under the loose nail the bed was dry and horny, but there was no tendency to epidermic accumulation.' Although there was no proof of the existence of the dartrous

R. W. Sherwin, del.

Mintern Bros, Chromo-lith.

Dr Sangster's case of Disease of the Nails.

diathesis, Mr. Hutchinson considered this case as one allied to psoriasis. The suppuration present in my own case was probably secondary, being caused by the accumulated dirt, and perhaps in some instances by the contagion of pus.

XXXIII.—*Two Cases of Popliteal Aneurism, cured by the application of Esmarch's Bandage.* By Christopher Heath. *Read February* 13, 1880.

Case I.

DAVID DAVIS, æt. 32, a coal-miner, was admitted to University College Hospital, under Mr. Heath's care, October 22, 1879, suffering from an aneurism of the right popliteal artery.

Whilst following his employment as a miner, he had often to work in a 'cramped' position—resting on his toes, his knees and hips being flexed—during many hours of the day, when the height of the 'working' did not admit of his standing or kneeling. No history of injury, unwonted strain, or of syphilis, could be obtained, nor were there any external evidences of the latter disease. During the last two years 'times had been hard with him,' but he appeared to have been a sober man.

The aneurism commenced about ten weeks before his admission to the Hospital, with 'pain' in the right popliteal space, when pushing a loaded waggon before him, or otherwise straining at his work. Shortly afterwards he noticed a 'swelling' which gradually enlarged, being about the size of a hen's egg when admitted. He suffered severe pain at times, and especially at night.

The tumour presented all the characteristic signs of an aneurism of the popliteal artery. The right posterior tibial pulse was not perceptible, that of the left being very indistinct. The brachial artery at the bend of the elbow was visible and locomotive, and there was slight epigastric pulsation. Heart sounds were weak, but otherwise normal, except the first sound at the apex, which was distinctly prolonged. Lungs, emphysematous. In other respects the patient's health was good.

On October 25th, the right knee was flexed and retained in that position for six hours, a hypodermic injection of morphia being administered. At the end of that time, however, the

pain became unendurable and the bandages were removed; the aneurism was *in statu quo.*

On the 29th, at 3 P.M., half a grain of morphia having been injected beneath the skin of the right thigh, Esmarch's bandage was applied to the limb in the usual manner, reaching to the lower border of the sac. A piece of Martin's india-rubber bandage was applied from above downwards in the thigh, stopping well above the aneurism, and over this the elastic cord was tightly drawn; thus pinching and bruising of the skin of the thigh were prevented, and the sac of the aneurism was rendered tense with blood. At 4 P.M. the patient was placed under the influence of bichloride of ethedene, the pain produced by the treatment having become very severe. At 6 P.M. the tourniquet and the bandage were removed by Mr. Heath—the former first—and the anæsthetic discontinued; all pulsation had ceased in the sac, and it was apparently solid. One hour afterwards, however, a slight return of pulsation was noticed by the house surgeon. Two of Carte's compressors were therefore applied, one to the groin, the other to the middle of the thigh, and the artery controlled by them alternately. Compression was thus kept up until 9 A.M. on the 30th. During the night the patient vomited once or twice, and, as he suffered a considerable amount of pain, he slept but little. His temperature did not rise above 100·2° whilst under the treatment.

When the compressors were taken off, pulsation had again entirely ceased in the sac, and did not afterwards return. There was slight tenderness over the sac, disappearing on the 31st; and on November 4th, he was 'up' for three hours. On the 14th he was shown at the Clinical Society, and on the 18th was discharged from the Hospital.

The following is an abstract of notes taken by the ward clerk, previously to his departure:—'Tumour is felt as a hard ovoid lump in the popliteal space, is decidedly smaller than on admission, and is devoid of pulsation. No pain or tenderness is complained of, and the patient can walk without any discomfort. An enlarged artery is felt on inner side of lower third of thigh, probably the anastomotic, and one on the inner side of the sac in the ham; none elsewhere. Posterior tibial pulse on right side cannot be felt, that on left very weak. General health excellent.'

Case II.

W. R., æt. 37, a potman, was admitted to University

College Hospital, under Mr. Heath's care, on December 2, 1879. He is a muscular, well-nourished, healthy-looking man, presenting no signs of general arterial degeneration. His lungs are emphysematous. The heart sounds are weak and distant, but otherwise healthy, with the exception of slight prolongation of the second aortic sound at the base. The aneurism of the right popliteal artery, which was somewhat larger, softer, and more oval in shape than in the last case, presented no exceptional features. From the fact that it possessed no bruit or thrill, and from its shape, it was thought to be of the 'fusiform' variety. Pain on walking and some 'soreness' in the tumour were complained of.

Pain in the right popliteal space was first noticed some two months before his admission, soon followed by a swelling, which rapidly increased in size. The patient has followed his employment as a potman for fifteen years, his work involving a great deal of running about, and occasionally considerable strain when lifting heavy casks, &c.; and during this time he has indulged freely in alcohol. He does not appear to have had syphilis, but states that he had rheumatic fever in 1874.

On December 3rd Esmarch's bandage and tourniquet were applied in the manner previously described, and retained *in situ* for three hours and a half, the patient being under the influence of bichloride of ethedene the greater part of the time. When removed, pulsation immediately returned in the aneurism. An endeavour was then made to control the artery by means of two of Carte's compressors, but owing to the pain produced by them and the impatience of the man, no effect upon the aneurism was produced, and when seen on the following morning it appeared to be in exactly the same condition as it was prior to the treatment.

On December 4th digital compression was employed from 1.30 P.M. till 4.30 P.M., with marked effect, the pulsation being much lessened thereby. From 4.30 P.M. until 11 P.M. the knee was flexed, being retained in that position by suitable bandages.

On December 5th much pain and tenderness about the right popliteal space were complained of; the aneurism was decidedly harder, and the pulsation, although still forcible, less so than on admission. 'Flexion' was again employed for four hours in the evening.

On December 8th Esmarch's bandage and tourniquet were for the second time brought into requisition, being retained

upon the limb three hours and a quarter, followed by 'flexion' for six hours.

When seen on December 9th the aneurism was much harder, but slight expansile pulsation was still evident. On the following day the pulse could not be felt in the corresponding posterior tibial, and there appeared to be no pulsation in the aneurism. An enlarged artery could be felt on the inner side of the patella, one running along the inner aspect of the tumour in the popliteal space, and one on the inner side of the head of the fibula. The patient still complained of considerable pain in the leg, which he characterised as 'burning' and 'aching.'

On December 18th the tumour was still harder, and perhaps a little contracted; no pulsation could be felt in it, and, although as yet tender, much less so than formerly. Œdema, which had appeared about the ankle, as a result of the treatment, was fast disappearing. The patient was still confined to his bed, but expressed himself as feeling perfectly well. In addition to the arteries mentioned, another on the outer aspect of the sac in the popliteal space could be made out, and the anastomotic also seemed enlarged.

Remarks.—The first case is a very favourable example of the application of Esmarch's bandage to the treatment of aneurism. Three hours' stagnation of the contents of the sac was sufficient for their consolidation; for having myself removed the bandages I am certain that all pulsation had then ceased. My house-surgeon thought that there was a slight return of pulsation an hour later, and very properly applied two tourniquets to the femoral artery, but undoubtedly at my visit next morning the aneurism was solid, and has remained so. The patient was exhibited in the anteroom of the Society a fortnight and two days after the treatment, when there could be no doubt of the completeness of the cure.

The second case was less satisfactory, since two applications of the bandage were necessary; but it may be remarked that the first application of the Esmarch's bandages produced very slight congestion of the skin left uncovered by them, and little or no tension in the sac, the latter being very soft and undistended. On the second occasion, however, intense congestion resulted, small extravasations being visible, the remains of which lasted some days; and further, when the bandages had been adjusted, the sac was exceedingly tense, being evidently full of blood.

I am inclined to lay stress upon the fact that no bandage was applied over the aneurism, and that an elastic bandage was applied from above downwards in the thigh, so as to make the sac tense with blood in a state of stagnation, because I believe these points are of importance. In the last volume of the Clinical Society's 'Transactions,' Mr. Jonathan Hutchinson has recorded his experience of the method in four cases, but in only one was solidification complete upon removal of the bandage, and Mr. Hutchinson says candidly 'in three out of my four cases it was the digital compression which completed the cure.' But then it is to be noted that the Esmarch's bandage was applied only for an hour, and that Mr. Hutchinson remarks, 'No attempt was made to empty the sac, which was indeed merely supported lightly by the bandage, the quantity of blood in it being only slightly diminished.' Now, I would venture to submit that any diminution of the contents of the sac would tend to prevent their coagulation, which is most likely to occur when the blood is maintained in close apposition to the sac. It is difficult to prove this experimentally, since aneurism in the lower animals is unknown, and only clinical experience will decide whether my suggestion is correct or not.

In order, if possible, to throw some light upon the subject, I had a physiological experiment performed as follows: Blood received into a bladder was allowed to coagulate, and in a similar bladder fresh blood was subjected to the pressure of a large syringe during coagulation, so that the bladder was kept tense until serum began to exude. The following day sections were made of the two clots, but the results were negative, no difference between them being appreciable.

XXXIV.—*A Case of Myeloid Disease of the Radius, in which the greater part of the Radius and several inches of the lower end of the Ulna were excised four years ago, leaving a very useful hand.* By Henry Morris. *Exhibited February* 13, 1880.

THE patient, Maria M., whose case is described at length in the tenth volume of the Clinical Society's 'Transactions' (p. 138 et seq.), was brought before the members on

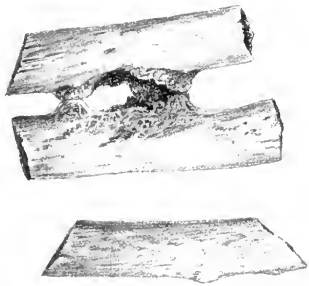
February 13, 1880. The radius had been excised from the wrist to the supinator brevis, and the ulna from the wrist upwards for nearly four inches. The condition of the arm is represented in plate VI. fig. 1, which is copied from a photograph.

The case affords great encouragement to surgeons to excise rather than amputate for myeloid growths of the bones of the upper extremity. It was four years since the operation, and there was no sign of recurrence of the disease, whilst the degree of usefulness of the hand thus preserved to the patient was very considerable. By the aid of a simple leather splint she was able to nurse, dress, carry and wash, and carve for her children, to do all her ordinary household work, and in addition to wash the home linen, and occasionally do a day's work as a charwoman. She could also stitch and darn, and was able to pick up a pin from off a table between her index and middle fingers, and pin her shawl together. She lacked, however, the power of the more delicate and complete opposition of the thumb to the fingers, partly on account of the pressure of the splint upon the carpo-metacarpal joint of the thumb, and partly on account of some rigidity of the phalangeal joints of the fingers.

Since the contraction of the soft tissues between the hand and the end of the bones of the forearm had taken place, she was able without any support to hold her hand out straight from the elbow, although for many months after the operation she had not been able to do so without her splint.

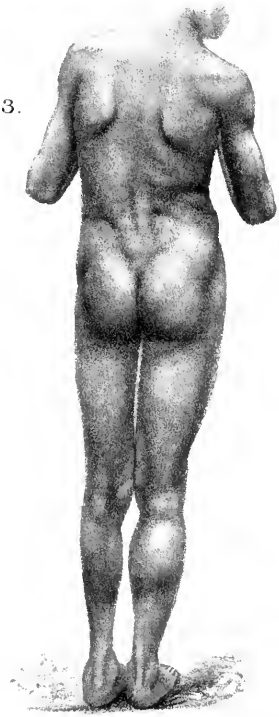
My only regret now is that I did not take away as much of the ulna as of the radius, because the retraction of the hand has been so great that the lower end of remaining ulna slightly overlaps the back of the carpus, and has given rise to some friction between the splint and the skin covering the bone, almost to the extent of causing a subcutaneous bursa. Indeed, at one time I thought that such a bursa really existed, but this swelling has subsided of late. It would be admitted, I think, by any surgeon who examined the limb and saw what uses the woman can put it to, that, so far from its being useless or an incumbrance, it was a very valuable and serviceable hand; surpassing in value, beyond all description, the most perfect artificial hand that can be made. Such was the conviction of the patient herself, and she has often expressed to me no little self-satisfaction at her resolute refusal to listen to any suggestion of amputation. I was the more desirous of giving the Society an opportunity of judging of her

1.



2.

3.



R. Mintern lith. Mintern Bros imp.

1. Mr Morris's case of removal of the bones of the Forearm. (p 155.)
2. Positions of ribs excised in Dr F. Taylor & Mr Howse's case of Empyema. (p. 19.)
3. Mr Clutton's case of Hypertrophy of the right lower limb. (p. 350.)

condition at this long period after the operation, because Professor S. W. Gross, in an able article on 'Sarcoma of the Long Bones' in the July number of the American 'Journal of the Medical Sciences' (1879), concludes from a collection of nine cases, of which this is one, that little can be said in favour of excision of myeloid sarcomas, for the reasons—first, that the mortality after excision is 3 per cent. greater than after amputation; and second, that, in all but one of the cases of recovery, 'the limbs were simply incumbrances.'

Professor Gross could only have seen an imperfect report of my case, or he would not have inferred that the limb was 'practically useless.'

XXXV.—*A Case of Paraplegia from Pott's Disease. Treatment by Sayre's jacket. Intestinal obstruction; death from a kink in the Duodenum.* By Thomas Buzzard, M.D. *Read February* 27, 1880.

GEORGE B., æt. 22, a labourer, whose business it had been to carry heavy sacks, and who had worked very hard, noticed about April 1878 that his back would ache, not so much whilst carrying the weight as after he had put it down. The aching would be very severe. As time went on this discomfort increased, till about November 1878, when it became very bad and continuous. The pain appeared to 'sting him' round the left border of his thorax. At the same time with the pain his legs lost power, the right rather before the left, and wasted. They got indeed so weak that on January 2, 1879, he was obliged to take to his bed. He was admitted into the National Hospital for the Paralysed and Epileptic in April 1879, under my care, and notes of his case were taken by Mr. A. E. Broster, resident medical officer. For two months previous to his admission the legs, he said, had been getting gradually very stiff. Since the onset of his illness he had never been able to lie on his side, as this hurt him. He was a healthy-looking man who, as he lay on his back, felt comfortable enough, slept well, and had no complaint to make of his general condition. On examining the spine an angular curvature was found in the dorsal region, the sixth dorsal spine forming the apex of the angle, the curve itself extending from the fourth to the tenth dorsal vertebra. Some tenderness to touch was complained of over

the curve. Movement caused pain in the back. Whilst at rest he was free from pain, but his legs 'twitched terribly at times and jumped up.' His lower extremities were absolutely powerless, not the faintest trace of any capacity for movement existing. There was apparently some wasting of the calves. The reflex from the skin was greatly exaggerated, so that when either leg was touched it drew up and became quite rigid. The effect of this was to 'shake him all through.' These movements occasionally occurred without any appreciable stimulus being applied. Reflex clonus was excited readily in either foot, and if his foot were allowed to touch the ground the movements would come on spontaneously. Patellar tendon reflex was exaggerated in each leg.

Cutaneous sensibility.—A line made to encircle the trunk horizontally two inches below the nipples would form a boundary below which neither a touch nor a prick of a pin were recognisable, either on the anterior or posterior aspect.

Over the ribs, just above this line, when he was touched he felt sore, and flinched exceedingly from the prick of a pin. The sensibility of the upper limbs and head was quite normal.

He complained of a bloated feeling below the navel, and a sense of aching in his legs.

On the legs neither heat nor cold was recognised. On the thighs each was said to 'feel a little warm.' Temperature was not recognised on the abdomen below the line already referred to, but a hot spoon applied to either iliac region caused the corresponding leg to jump sharply up. Above the line the sensibility to temperature was unchanged. There was no control over the urine and fæces.

On April 24 the patient was swung and encased in Sayre's plaster splint. On the 28th I ascertained that he was feeling quite comfortable, and that there was less twitching of the legs. On April 30 he dined heartily, indulging freely in dough pudding. He remarked to a patient that he had made a large dinner, but that somehow he did not feel quite comfortable. During the afternoon his bowels were moved.

May 1.—Last evening he was seized with vomiting, which continued all night in spite of treatment. An ordinary enema was given, but was not retained, and produced no result. As the vomiting continued, the plaster casing was removed by the resident medical officer. The patient's temperature was normal, the pulse feeble.

2.—It was noted that there was much tenderness over the abdomen, especially in the epigastric region. There was some distension to the left of the epigastrium, whilst gurgling was felt in the right epigastrium. It appeared on examination by percussion that the stomach was much distended, reaching nearly up to the left nipple and across below the right margin of the thorax. The patient complained of much pain in the belly, and could keep nothing down. The vomited matter consisted of a green watery fluid. There was great thirst. Hot fotus was applied to the abdomen, and morphia administered hypodermically. The abdominal wall was very much distended. Nothing was taken except milk and water, and this was not retained. Morphia was continued hypodermically, and this controlled the vomiting and procured some ease from pain. No peristaltic movements of the intestines were to be observed. At midnight it is noted that there had been no more sickness, but that the patient appeared to be getting very low. The abdomen was still tender, especially in the epigastrium, the stomach much distended. He complained of a little pain and discomfort.

3.—This morning profuse vomiting recurred. A greenish brownish fluid, without fæcal odour, streaming from his mouth and nostrils. This lasted about half an hour, when he died, apparently from exhaustion. The symptoms of intestinal obstruction had not lasted more than sixty-eight hours. At no time did the vomited matter betray any fæcal odour.

Autopsy, 24 hours after death.

Spinal column.—On separation of the muscles about it the sixth dorsal spine was found to be displaced $\frac{1}{2}$ inch to the left of the middle line, and to project $\frac{1}{2}$ inch further back than the other spines. On opening the column at this point the dura mater was found thickened and adherent to the anterior wall, and when the cord with its membranes was removed, pieces of the bodies of vertebræ came away attached to the dura mater. The attachment was brought about apparently by inflammatory change in the loose connective tissue and fat which normally separate the dura mater from the wall of the canal. Opposite the diseased vertebræ this tissue has become much thickened and condensed. With little trouble the dura mater proper can be peeled off this altered tissue, and does not itself appear diseased, except in its outer layer. On the posterior wall there was no adhesion. The

thorax was opened and the lungs and heart removed. On then looking into the cavity of the thorax a swelling, which was felt to be semi-fluctuating, was found lying close to each side of the spinal column. The masses were about the size of a pigeon's egg, that on the left being the larger and more fluctuating. Their contents were inspissated pus (something like mortar in look and consistence) and disintegrated bone. These abscesses communicated across the front of the bodies of the sixth, seventh, and eighth dorsal vertebræ. The bodies of these vertebræ were found to be carious and disintegrated. The bend of the canal at the point of curvature formed an angle of about 125°. The cord was correspondingly bent upon itself.

Spinal membranes.—The external layer of the dura mater at the part corresponding with the diseased bones was inflamed and thickened. On slitting it up no signs of inflammation and no adhesions were to be discovered in any part of the arachnoid or pia mater.

Spinal cord.—The cord opposite the decayed vertebræ had lost its natural stiffness and bent upon itself easily. For a length of about five inches there appeared to be a want of proper consistency in it, but this was most distinctly noted opposite the fifth and sixth dorsal vertebræ, where it was evidently much softened. The cord was incised freely, and placed in a hardening solution.

Abdomen.—The intestines were removed from below upwards, beginning with the rectum, and so on through the colon and small intestines. On nearing the upper end it was found that the small intestine was folded suddenly down upon itself about 8 or 10 inches from the pylorus. The duodenum was greatly distended, measuring at least 3 inches transversely, up to the point where the passage was obstructed. The stomach also was greatly distended. It measured at least 13 inches transversely, and 8 inches from the œsophageal opening to the lower curvature. The stomach and duodenum both contained a quantity of dark greenish grumous fluid, with undigested food, especially currants. The odour was offensive, but not stercoraceous. The pyloric valve was practically obliterated owing to the distention. The mucous membrane of the duodenum was much congested as far as, but not below, the point where the gut had been folded upon itself. The duodenum appeared to be shortened in proportion to its increase of breadth. The dilated stomach extended into the umbilical and right lumbar regions. The

whole of the intestines, small and large, below the part obstructed were contracted, and contained many scybala. The vessels of the mesentery were much injected. About a dozen currants were found to have made their way into the small intestine for a foot or so below the kink.

Remarks.—There are many points of interest in this case. First, as regards the origin of the disease in the spinal column, this must evidently be looked upon as traumatic, and due, probably, to the strain upon vertebral ligaments by the carrying of very heavy weights. I have at the present time in hospital a case of similar character in which the disease is ascribed to the carrying of sacks.

In neither case was there any history of scrofulous disease or phthisis in the family. Indeed, the malady must be regarded in each instance as clearly the result of mechanical violence; and the cases so far tend to confirm the strong opinion which has been given by Professor Sayre in reference to this point.

Sayre says: 'With regard to Pott's disease I have held for many years that it is almost always, if not always, produced through some injury to the bone or cartilage, and that, in common with carious diseases of other joints, it is essentially of traumatic origin. The almost constant primary cause, I believe, is some injury sufficient to disturb the nutrition of the bodies of certain vertebræ and the intervertebral cartilages, and to induce inflammatory softening and disintegration of the structure of these organs.' It frequently occurs, he admits, in tuberculous subjects, but even in these traumatism is a necessary condition for its development.

Secondly, what was the cause of the paraplegia?—The spinal cord was curved abruptly at an angle of 125°, but the cavity in which it lay, although encroached upon to a certain very small extent by the thickening of tissue external to the dura mater, did not appear to be sufficiently narrowed to affect the calibre of the cord. There was no pinching or obvious compression, except what was due to the bending of the cord upon itself. The soft membranes, the surface of the cord, and the internal surface of the dura mater were entirely free from traces of inflammation.

The amount of curvature to which the cord in this instance was exposed did not exceed that which must necessarily exist in many persons affected with crooked spine in whom there are no symptoms of paralysis. We know, on the other

hand, that cases occur in which Pott's disease of the column may be attended with but little manifest deformity, and yet be accompanied by marked paraplegia.

In this patient post-mortem examination showed that the cord was softened, the change being due to a diffuse myelitis affecting especially the part of the organ opposite to the diseased vertebræ.

Michaud,* in his thesis upon Pott's disease, says that the process which most frequently occurs is as follows: 'There is sinking of one or more vertebræ as a result of caries. The vertebral ligament is disconnected, ulcerates, and is destroyed; the pus, irritating the anterior aspect of the dura mater, causes it to inflame. Thus there is developed a special external caseous pachymeningitis. The external aspect of the dura mater proliferates, vegetates, and forms a sort of mushroom, which compresses the cord. The inflammation is propagated circularly from before backwards, but the "mushroom" rarely forms a complete ring.' Now, in this case, although, as I have described, there was a certain amount of pachymeningitis, yet there was no such growth as could be characterised by the term 'mushroom,' and the amount of thickening appeared insufficient to exert compression upon the cord. I would add, too, that the soft membranes underlying the dura, and the surface of the cord itself, betrayed no sign whatever of inflammation. Unless we suppose that the sudden and sharp bending upon itself of the cord started the inflammatory changes, it is difficult to explain the occurrence of so destructive a lesion as was present in this case.

Vulpian says of the paraplegia from slow compression of the cord in Pott's disease that it is usually a more or less complete paralysis of mobility, with preservation nearly intact of sensibility, and especially of tactile sensibility. Or there may be pains around the waist or in the joints of neuralgic character. In my patient the anæsthesia was extremely well marked.

Thirdly, as regards the treatment of the paraplegia.—The object with which Sayre's plaster jacket was applied in this case was to preserve the spinal column in the best possible position during the process of ankylosis which might be taking place, without the necessity of the patient continually keeping the recumbent posture. I may say that the jacket was put on in the most skilful manner by Mr. A. E. Broster, our

* Paris, 1871.

resident medical officer, who has had large experience in the application of the method in the wards of our hospital. A personal examination of the casing and inquiry of the patient a couple of days after its application showed me that it was in excellent order.

The point of special interest in the case is as to the possibility of the jacket having conduced to the twist in the bowel which has been described. The situation occupied by the displacement is, I think, a very rare one. Brinton ('Intestinal Obstruction,' 1867, p. 84) speaks of the *small intestine* as only furnishing one-fourth of the total number of cases of this accident; and of these, again, he says the ileum is by far the most frequent site. He considers that a twist of this kind is often directly traceable to such mechanical embarrassments as can scarcely act save by interfering with peristalsis. Now, in a case like that before us, in which there was complete paraplegia from pressure upon and destruction of the cord in the middle of its dorsal region, it is, to say the least, probable that the innervation of the intestines must have been considerably interfered with. The splanchnic nerves, it will be remembered—which are the channels by which the influence of the cerebro-spinal centres is conveyed to the intestine—correspond with thoracic ganglia connected with the cord from the fifth dorsal nerve downwards. We may conceive, then, from the situation of the lesion in the cord in this case, that the intestinal peristalsis may have been embarrassed. The seat of the kink was just where the duodenum forms a rather sharp angle with the beginning of the jejunum. At this point, as we are aware, the duodenum is fixed by the connective tissue which lies about the cœliac axis, and by a fibrous band descending from the left crus of the diaphragm. The jejunum, on the other hand, is free. It is conceivable that when the ribs were more or less completely fixed by the jacket, and the stomach distended with food, the jejunum, being subjected to a downward pressure from the descent of the diaphragm during inspiration, might easily get bent down upon the duodenum, which could not itself descend on account of its attachments. In the ordinary circumstances of health we may suppose that such an occurrence need not be uncommon, and that it is speedily remedied by the peristaltic movements of the bowel. In the case before us this peristaltic power was probably feeble or absent. The twisted portion of gut, unable to unroll itself by muscular action, would be compressed between the mass of intestines and the

abdominal wall, made rigid with plaster, in front, and the duodenum distended with food behind.

In venturing on these remarks I must not, of course, be taken as expressing the opinion that such was the case. The incident may have been, it is evident, a simple coincidence, quite unconnected with the patient's disease or its treatment.

I have come across the narrative of a case which appears to bear to some extent upon mine, and which may here be conveniently cited.

In the 14th volume of 'St. Bartholomew's Hospital Reports' Mr. Willett has published an account of a case in which fatal vomiting followed the application of the plaster-of-Paris bandage in a case of spinal curvature. The patient, 17 years of age, who was affected with an uniform posterior curve of the whole dorsal and lumbar regions of the vertebral column, was suspended, and Sayre's bandage applied. Just before the application was completed the patient said he felt sick, and retched once, but did not vomit. He was laid down, and complained of being faint. The dinner pad was removed, and after taking some water he quickly recovered, and in an hour walked away. Six days afterwards he died in the London Hospital, whither he had been removed in consequence of constant sickness, which had commenced soon after his return home.

It appeared that lividity, with difficulty of breathing, was noticed a day or two after the application, which symptoms were relieved by the removal of the splint; but vomiting continued at intervals until he died, forty-eight hours after admission into the London Hospital. The sputa were frothy, and smelt offensively.

On post-mortem examination the stomach was found enormously dilated in all directions, occupying more than half the abdomen; walls strikingly thin; mucous membrane pigmented in parts, and mucus firmly adherent to it, studded with grey follicular spots. The membrane also had a milky appearance, as though it had undergone some fibroid changes. Pyloric orifice normal; intestine, intense venous congestion throughout. No cause of obstruction. Peritoneum normal. The dilatation of the stomach was thought to have been of long standing.

Lastly, as regards the seat and character of the obstruction.—During life (and the accident was so rapidly fatal as to give but little time for observation) I concluded, from the

severity of the symptoms, the absence of writhing movements of the intestines, and the absence of feculent odour in the vomited matters, that the obstruction existed high up in the intestine, but I did not find myself able to form any strong opinion as to its cause. The circumstances, however, suggested a hope that it might be due to a blocking of the intestine by the dough-pudding, and this would necessarily be only of a temporary character. Its nature, as it turned out, was such as would have peculiarly fitted the case for operation, but I must leave it to my surgical *confrères* to say whether the position of the volvulus, in the duodenum, would have been a bar to gastrotomy.

The cord was hardened with chromic acid. Sections coloured with carmine (which are exhibited) show the following appearances under the microscope:—

In the upper part of the lumbar enlargement there is sclerosis (overgrowth of connective tissue with disappearance of nerve fibres) of both lateral columns in their posterior halves. An inch above this there is some sclerosis, involving the whole of the antero-lateral columns. A little higher, and the same appearance is still more marked. The connective tissue through the whole transverse extent of the antero-lateral columns presents signs of overgrowth, and there is also evident increase of the fibrous element, though not to the same extent, in the posterior columns.

In the lower dorsal region there is general overgrowth of the connective tissue throughout both grey and white matter, with numerous nuclei of irregular oval shape.

At the point corresponding to the part where the cord was found most softened the section presents a mottled appearance, consequent upon masses of thickened connective tissue contrasting with small circular spaces, many of which are apparently medullary sheaths of nerve-fibres deprived of their axis cylinders. Both grey and white matter are crowded with nuclei. Very few axis cylinders are to be seen, but many large ganglionic cells are still visible in the anterior cornua. The posterior cornua, however, and especially the left, appear completely disintegrated.

An inch higher, in the upper middle dorsal region, the anterior cornua are lost anteriorly, being merged in the anterior columns, all trace of the natural structure of which is lost.

Throughout the lateral and posterior columns the growth of connective tissue is largely increased, the septa being enormously thickened. But few axis cylinders are to be seen; vacuoles and empty medullary sheaths are numerous. In the lower part of the cervical enlargement there is sclerosis confined very distinctly to the columns of Goll, and the same condition is seen at a point an inch higher, and again in the upper part of the cervical enlargement.

To sum up, the microscopical investigation shows the appearances of transverse interstitial myelitis in the mid-dorsal region, with secondary degeneration involving especially, although not exclusively, the lateral columns in the lumbar region and the posterior median columns in the cervical region. The most striking feature is the enormous development of connective tissue.

XXXVI.—*A Case of Molluscum Fibrosum, with some Remarks on its Histology.* By Alfred Sangster, M.B. *Read February* 27, 1880.

THE patient, J. S., æt. 50, was a workman by occupation, small in stature, but by no means stunted or ill-developed.

There was nothing of interest in his family history. One of his children was said to have been born with a small tumour on the penis, similar in appearance to those seen on the patient. It was also stated that his wife developed a small tumour of like nature. Nothing peculiar was noticed about his skin until he was 23 years old. He then saw the first tumour. It appeared at the lower end of the sternum, on the right side, its position being now marked by the pendulous mass to be referred to presently. Tumours soon developed rapidly, and, according to the patient's statement (one which can scarcely be credited), at the expiration of a year from the appearance of the first lesion his body presented much the appearance it has now, so rapid had been the advance of the disease. On examination the trunk was found to be most affected, the disease presenting a severity of type similar to that depicted in the Sydenham Society's Atlas; in front, from the clavicles to the lower ribs, hundreds of molluscum tumours were thickly and irregularly scattered, with the usual diversity as to size, shape,

mode of attachment, &c. The same description applies to the back; but it was evident that the tumours tended to congregate especially in the groove between the erector spinæ muscles. Here they were so closely placed that their opposing walls became in many instances flattened by mutual pressure. The buttocks, scapular regions, sides of thorax, and abdomen were the parts of the trunk most free. Although the arms were comparatively exempted from the disease, isolated lesions, some large, were found on the fore-arms. There were also many small tumours on the backs of the hands. A few lesions were seen on the thighs, scarcely any on the legs. There were two tumours on the sole of the right foot. The neck, scalp, and face were affected, the latter but slightly, and, according to the patient's statement, only within the last three or four years. There was a small tumour on the hard palate.

It is unnecessary to give a detailed description of the lesions, as for the most part their appearance corresponded with the many accounts which have been furnished by authors. A few points of interest, however, deserve notice. On pinching up the skin over such tumours as presented the sebum plugs (comedones), alluded to by authors, it was seen to pucker and become depressed at the seat of the comedo, showing the deep attachments of the latter. This condition was observed in a case reported by Dr. Fagge. Instead of the usual firm, round, button-like appearance, some of the lesions were broadly conical or nipple-like in shape, $\frac{1}{2}$ inch or more in diameter. These mammillated lesions were soft and elastic to the touch, as if a cavity had been hollowed out in the skin and filled with a semi-fluctuating material. On exposure they became livid and nævoid-looking. On viewing the skin in a side-light it appeared to be sown in places, with papules, presenting a central depression; suggesting the association of the earliest lesions with follicular apertures—protruding from a few, were long and wiry-looking hairs. One tumour on the right of the sternum was as large as a small orange; it was pendulous, the skin over it flaccid and wrinkled; when handled it felt like a varicocele. This tumour, the patient asserted, was the first to develop.

On the sole of the right foot, towards its outer border, but well within the plantar surface, was a flat elevated surface as large as a horsebean; the sound skin was overlapped by its margin. There was another somewhat similar lesion on the inside of the foot. These were evidently mol-

luscum tumours flattened by pressure. The skin everywhere had a muddy look. There was clearly much disturbance of pigment; brown patches of all sizes being scattered irregularly over the surface. (A similar condition has since been noted in two other cases of molluscum fibrosum, although in one the patient declared the patches had been present from birth.)

Remarks.—It was curious to note that in the case reported the tumours appeared most thickly scattered in the region of the nipples, and between the shoulders, two favourite seats for the development of the single molluscum lesions so largely met with in individuals.

On referring to cases which have been put on record large pendulous folds of skin, like dewlaps, have been found associated with the usual smaller lesions—it is possible that the pendulous tumour on the right of the sternum was becoming of this nature. In the case reported the disease, if the patient's account may be trusted, did not develop until later in life than usual.

The occurrence of the tumours on the sole of the foot was a point of great interest in the case. Unfortunately, the patient would not allow their removal for microscopical purposes. They caused no inconvenience.

Most observers agree in describing these tumours as made up of young (gelatinous) connective tissue growing from the deeper layer of the corium (Rokitansky, 'Pathol. Anat.' Bd. 2, p. 69), or in connection with the strands of fibrous tissue which separate the lobules of the subcutaneous fat (Virchow, 'Geschwülste,' Bd. 1, p. 326). The glands and hair follicles are said to be but accidentally included in the tumour, 'unaltered in some parts of the tumour, or in many tumours everywhere intact, the former being the condition most frequently met with' (quoted from Kaposi's article on molluscum fibrosum, in Hebra's work on Skin Diseases, Syd. Soc., vol. iii., p. 336). In a paper by Dr. Fagge, 'On the Anatomy of a Case of Molluscum Fibrosum,' published in the 'Medico-Chirurgical Transactions' (vol. liii.), it is affirmed by Mr. H. G. Howse, who examined the tumours microscopically, that the starting-point of the growth is the connective tissue envelope of the hair follicles and sebaceous glands. Several tumours were excised from the patient J. S. (whose case is reported above) and examined microscopically. Without giving any detailed description of the appearance (which would be out of place in a communication of this character),

DESCRIPTION OF PLATES.

Plate VII.

Fig. 1.—From a photograph of the patient.

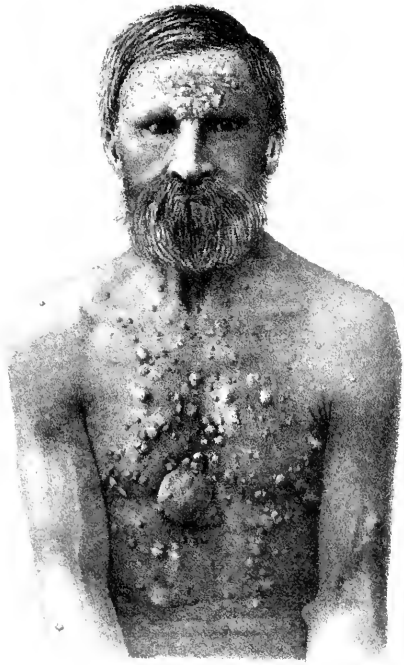
Fig. 2.—Vertical section through a tumour removed from the patient (low power).

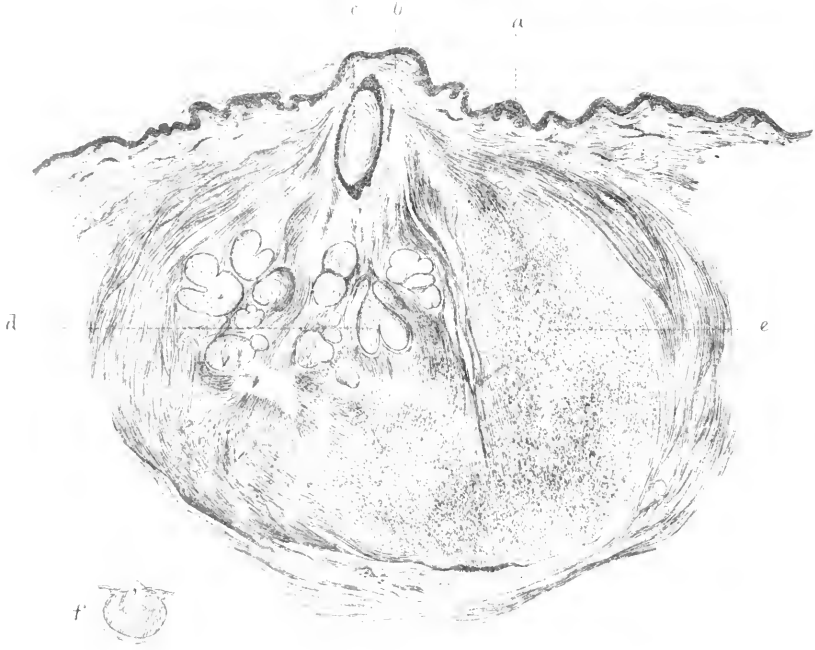
(*a*) Epidermis.
(*b*) Corium.
(*c*) Hair follicle, partly divided.
(*d*) Sebaceous gland, hypertrophied.
(*e*) The connective tissue new growth (gelatinous tissue).
(*f*) Natural size of tumour.

Plate VIII.

Fig. 1.—The appearance of the disease in the pectoral region (life-size).

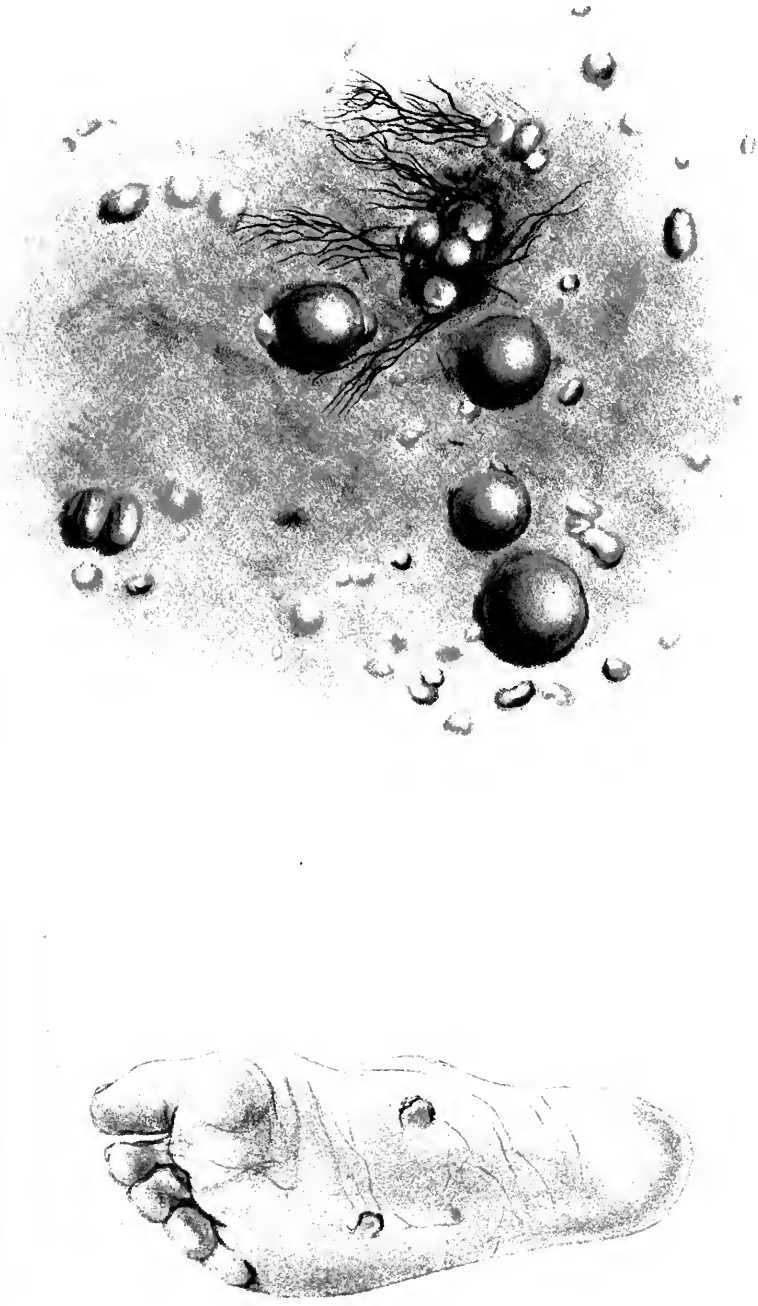
Fig. 2.—The sole of the right foot, showing the position of the tumours.





R. Mintern lith. Mintern Bros. imp.

Dr Sangster's case of Molluscum Fibrosum.



R.W. Sherwin, del. Mintern Bros, Chromo-lith.

Dr Sangster's case of Molluscum Fibrosum.

a few facts in support of Mr. Howse's view may be mentioned. In most instances the sebaceous glands showed abnormal activity of growth (hypertrophy). Many hair follicles were enormously distended with *débris*, the root-sheaths presenting irregular outgrowths or other signs of cornification. The association of the gelatinous new growth with the above condition of glands was very general.

There were transverse sections of hair follicles lying in the neighbourhood of the gelatinous masses, but isolated from them by normal tissue. Round these (the hair-follicles) was seen a regular coating of densely nucleated fibrous tissue four or five times the thickness of the normal fibrous envelope.

Fig. 2, Plate VII., represents a vertical section of a molluscum as seen under a low magnifying power. The tumour selected was about the size of a large pea, and presented a well-marked comedo about its centre.

On referring to the figure it will be seen that, although the section does not involve the comedo orifice, part of the follicle is divided at *c*; lower down, at *d*, the sebaceous gland is seen to be hypertrophied, its lobules widely separated by fibrous tissue. The gelatinous new growth at *e* presents the characteristic homogeneous granular appearance as seen under a low magnifying power. On all sides the new growth gradually becomes continuous with the more open fibrous tissue, being bounded above by the deeper layer of the corium. Looking at the entire section, the mass of gelatinous tissue, from its general contour, certainly has the appearance of a new growth, associated with the gland and intercalated between the deeper layers of the corium.

Against the sebaceous gland theory of origin of the growth there is the fact, as in the case reported, that the tumours are sometimes seen on the sole of the foot. To account for this phenomenon it has been suggested that possibly there are stray sebaceous glands in this situation, or that here the growth takes place in association with the fibrous coating of the sweat-glands. Kaposi, in the article already quoted, points out the fact that in the older tumours the glands become atrophic, accounting for the baldness of the tumours on the scalp. This tendency to atrophy of glands in the later stages of the disease may, perhaps, help to explain the discrepancy of opinion as to the part played by them. It is, however, certain that in some tumours the sebaceous glands dip down deeply into the substance of the

growth, and are not simply confined to the thickness of skin over the tumours, as has been affirmed by some authors. Many acari (*demodex*) were found occupying the mouths of the follicles.

Appended is a list of some of the more important communications upon molluscum fibrosum to be found in English and American literature:—

'Molluscum Fibrosum: Lectures on Clinical Surgery,' vol. i., part ii., p. 196; Hutchinson.

'On Anatomy of a Case of Molluscum Fibrosum,' 'Trans. Med. Chir. Soc.,' vol. liii., p. 217; Fagge.

'Molluscum Fibrosum in Children,' 'Trans. Med. Chir. Soc.,' vol. lvi., p. 235; Murray.

'Molluscum Fibrosum,' 'Med. Chir. Trans.,' vol. lvi., p. 255; Pollock.

'Clinical Lecture on Molluscum,' 'Lancet,' May 15, 1841; Thompson.

'Remarkable Case of Tumours,' 'Med. Chir. Trans.,' 1841, p. 225; Ancell.

'Molluscum Fibrosum,' 'Trans. Path. Soc.,' 1875, p. 219; Pollock.

'Molluscum Fibrosum,' 'Journal of Cutaneous Medicine,' 1867, vol. i., p. 67; Anderson.

'Dermatolysis,' 'Journal of Cutaneous Medicine,' 1869, vol. iii.; Wilson.

'Fibromata of the Skin and subjacent Tissues,' 'Archives of Dermatology,' 1876, p. 193; Wigglesworth.

'A Case of Molluscum Simplex,' 'Archives of Dermatology,' 1875, p. 300; Octerlony.

XXXVII.—*A Case of Anæsthetic Leprosy.* By H. Radcliffe Crocker, M.D. *Shown February* 28, 1880.

JOHN H., æt. 7 years, was brought to the East London Hospital for Children on June 4, 1879, for partial paralysis of both hands. The following history was elicited: The father was a soldier, and healthy. The mother had had ague while abroad, and suffered from 'liver complaint,' during which she was jaundiced. She had also had several miscarriages. The boy was born at Pulo, Penang, and lived there and at Singapore until he was four years old; his mother and he then came to England, and lived near Sudbury, in Suffolk. At that time he appeared perfectly healthy, and continued

so for six months, when he had ague, which was prevalent in that district; it lasted a week, and was relieved by quinine. About two months after 'spots' appeared upon the forehead and face, and a little later upon the hands, arms, buttocks, and legs. These were recognized as leprosy by the local doctor. About a month after the outbreak he began to drop things about, and the arms got very thin. The hands and arms got gradually weaker for twelve months, since which the paralysis has been stationary.

The mother describes the spots as bluish-red blotches slightly raised. Some of them were as big as a crown-piece, and on the buttock as big as the hand. 'Blisters filled with water' came on the hands and knees in cold weather. The condition when first seen was as follows: The face has a mottled look, with brownish discolorations; the nose is broad and flattened, with round open nostrils, the expression is dull. Similar discolorations exist on other parts of the body. On the right knee there is a patch $1\frac{1}{2}$ inches long by $\frac{3}{4}$ inch wide, brown, and slightly raised; round it are several raised white tubercles $\frac{1}{8}$ inch in diameter. Outside is another smaller scar-like brown patch, on the border of which are also some tubercles. Below both knees are patches about 5 inches by 2 inches, white in the centre, with irregular pigmented edges. They look like patches of leucoderma, but the mother says they were originally brownish and slightly raised.

Anæsthesia exists in the following situations: on the upper part of the face and cheeks, on the back of the hands and arms up to the elbows, the left somewhat less marked than the right; on the flexor surface of the forearms and the palms sensation is a little blunted only. The ulnar nerves are perceptibly thickened. Sensation is not lost on the spots on the knees, but all round for about three inches anæsthesia is complete, and all down the outer side of the leg to the ankle, but not on the inner side. The right hand is wasted in the thumb-ball muscles, and the interossei of the fourth and fifth metacarpal bones. The fingers are habitually bent, the thumb, fore and middle finger at the phalangeal joints to a slight extent forming a curve, but the ring and little fingers at right angles; the ungual phalanx being in extension, extension can be made at the metacarpo-phalangeal joints. Some power of grasping is retained, but the whole hand is much weaker. The left hand is similarly affected, but in a less degree; the thumb and forefinger can

be completely extended, the middle finger only slightly bent, and the ring and little fingers are at a less acute angle than on the right side. Motion at the wrists does not seem impaired, but the forearms are weak. He can only walk at a slow pace, and soon gets tired and wants to lie down.

He was ordered to have his arms galvanized, and to take ol. chaulmoograe ℥v. liq. potassæ ℥vij. aq. cinnam. ℥ss three times a day after meals. The chaulmoogra oil was gradually increased to ℥xv. ter die, but not without complaint of its producing nausea and abdominal discomfort, and at times even vomiting. No larger dose could be borne. Another tubercle, about ¼ inch in diameter, but not discoloured, appeared upon the right cheek soon after he came under notice. On September 3, 1879, a little improvement in the strength of the arms was noted, and all the tubercles except that on the face had gone. In December the oil was suspended for a few weeks on account of vomiting and slight diarrhœa. A blister came on the ball of the thumb in the middle of October, and others formed in different parts of the hand at intervals during the severe winter weather. The sores resulting were treated by, and healed slowly under the the use of ol. chaulmoograe ʒij, adipis ʒiv. When the patient was shown at the Clinical Society there was considerable improvement in the general health. The expression was brighter, and there was a little more power in the hands and arms, but the anæsthesia was unchanged. In the spring he had a slight return of the ague, which was soon relieved by quinine.

Remarks.—This case, while affording a good example of anæsthetic leprosy, is interesting on account of the long delay in the manifestation of the symptoms after leaving Singapore, and of the influence of malaria in this country in developing the disease. Its treatment bears favourable testimony to the utility of chaulmoogra oil in leprosy.

XXXVIII.—*A Case of Impacted Fishbone in the Œsophagus, penetrating the Diaphragm and Pericardium, and wounding the Heart.* By Frederic S. Eve. Communicated by Howard Marsh. *Read March* 12, 1880.

A MAN, æt. 59 years, while partially intoxicated, ate some plaice for supper. The next morning he complained of pain in the throat, as if something were sticking there,

and he had some difficulty in swallowing. During the day he was engaged in his usual occupation, and carried a basket of fruit, weighing about 30 lbs., some distance.

Suffering considerable pain in the throat and chest, he went in the evening to the nearest hospital, where the house surgeon passed a dilating horsehair probang. The patient's son, who accompanied him, states that on leaving the hospital his father was extremely faint and ill, and complained of severe pain in his chest—as he expressed it, 'in his heart.' With great difficulty he succeeded in walking home.

The patient did not again leave his bed; the pain in the chest was severe, and he vomited nearly all food. On the third day after that on which he went to the hospital the pain had slightly diminished, but the vomiting continued. There was no difficulty in breathing. Late in the evening he got out of bed, stood upright, and spread out his arms, stretching himself; he suddenly staggered; his wife ran to support him, and he immediately expired.

Mr. Spark, who was then sent for, subsequently made the post-mortem examination, and was good enough to present the specimen to the museum of St. Bartholomew's Hospital. A lance-shaped fishbone, about two inches long, had penetrated the anterior surface of the œsophagus about a quarter of an inch above the cardiac orifice, transfixed the tendinous portion of the diaphragm, and the sharp extremity projected through the posterior portion of the pericardium. On the opposed surface of the heart, half an inch to the left of the posterior inter-ventricular septum, there was a lacerated wound, consisting of two punctures placed side by side, and extending a quarter of an inch downwards in the ventricular wall, but not penetrating it. The fishbone was directed obliquely upwards and forwards. The broken extremity was found projecting into the œsophagus. The parietal and visceral pericardium around the puncture was discoloured and covered with lymph. The heart was soft and flabby; the pericardium was fully distended with sanious serum, and contained some blood-clot.

Remarks.—Death was evidently due to syncope from embarrassment of the heart's action by the pericardial effusion.

This case may, I think, be classed among the calamities of surgery. The position of the fishbone, and the severe pain and faintness after the passage of the probang, indicate, I think, that the bone was driven by that instrument

into the situation described. It appears probable that when pushed down the point of the fishbone penetrated the œsophagus immediately above the contraction of the sphincter, and was then driven into the horizontal position, or inverted; on the withdrawal of the instrument the horsehair would be likely to catch the extremity of the bone and drive it obliquely upwards.

It is scarcely necessary to call attention to the numerous cases on record in which fishbones, needles, pins, &c., have worked their way through the œsophagus into the aorta or other structures in the thorax.

Mr. Durham mentions a case* in which a fishbone was found lying in a similar position to that in the specimen described above, except that it penetrated the stomach just below the cardiac sphincter. I infer from the description that the patient was not subjected to treatment.

There is in the museum of St. Bartholomew's Hospital an aorta which was nearly severed, immediately below the origin of the left subclavian, by the sharp extremity of a fishbone that had penetrated the œsophagus. Death took place, ten days after the bone was swallowed, from repeated hæmorrhages. Two similar cases are mentioned by Mr. Durham.

It is, of course, absolutely necessary that, if practicable, the foreign body, if hard and sharp, should be removed immediately; but, as the case related shows, the recognized treatment occasionally leads to fatal results. When the foreign body is out of reach of the finger it is impossible to tell whether the symptoms do not depend merely on a scratch or abrasion of the gullet, and impossible also, in the absence of history, to ascertain the nature of the foreign body.

There appears therefore room for considerable improvement in the means of diagnosis and treatment of these cases.

* Holmes's *System*, vol. ii., p. 521.

XXXIX.—*Case of Typhoid Fever, associated with acute Nephritis and profuse Hæmaturia, without Dropsy.* By Edward Headlam Greenhow, M.D. *Read March* 12, 1880.

P. D., æt. 21 years, a porter by occupation, was admitted into the Middlesex Hospital, under my care, on November 25, 1879. The patient did not remember having ever been ill until his present attack, which commenced on Friday, November 21, with headache, pain in the abdomen, and general malaise. Next day he remained in bed, and on attempting to rise experienced great pain in the legs, which he described as rheumatic. On Saturday, the 22nd, he had an attack of violent shivering, and the following day was sick; he now likewise began to suffer from cough and slight sore throat. On Saturday night he suffered from straining and difficulty in passing water, and observed that the urine passed was almost black in colour. From this time the calls to micturate were very frequent, and accompanied by strangury.

State on admission.—Pulse, 108; temperature, 103·2°. Urine, sp. gr. 1012, of a deep red colour, from admixture with blood; albumen one-half. On microscopical examination numerous blood globules, blood casts, and some epithelial casts were found.

The patient was very prostrate, and complained of pains generally over the trunk and limbs. He was too weak to undergo a minute examination of the thorax, but the resonance on percussion was fairly good, excepting in the right infra-clavicular and supra-scapular regions, in both of which it was rather impaired; the breathing was also bronchial, and accompanied by a few crackles, and the vocal resonance was increased in these situations; no adventitious sounds were audible in any other part of the lungs. The heart's apex beat in the normal position, and the sounds were clear, but the second sound was reduplicated at the base. The abdomen was somewhat tympanitic and distended; there was considerable tenderness on pressure, and distinct gurgling in the right iliac fossa; the liver and spleen appeared to be of normal size; the patient had no diarrhœa, and there were no rose-spots. Ordered to be sponged every four hours with

cold water containing solution of permanganate of potash, and to have beef-tea and milk freely, but no bread.

9 P.M., pulse 126, temperature 104·8°.

Progress of case.—The illness ran a rapid course, and the prostration daily increased, notwithstanding the free administration of stimulants. The patient for the most part lay upon his back, with the knees raised, but was sometimes found lying upon his side; the pulse ranged during the subsequent days from 100 to 130, and the temperature from 97·6° to 104·8°. The nights were restless, and there was much wandering of mind, but towards the close of life the patient became drowsy and heavy, though always capable of being roused. The headache soon passed off; subsultus tendinum was occasionally observed, and the day before death the arms and legs, more especially the right arm, became rigidly flexed; the pupils, at first rather large, became small and contracted a few days after admission, but were equal in size, and responded freely to the stimulus of light. The tongue soon became dry and fissured, and the lips and teeth covered with sordes. The urine continued to be stained with blood, but the colour became less deep, and the quantity of albumen diminished greatly about November 30; the cough remained troublesome; the sputum was scanty, and often streaked or stained with blood. The abdomen became more distended, and continued more or less painful on pressure, especially in the right iliac region, over which the abdominal walls were tense and resisting. The spleen was discovered to be enlarged on November 28; the bowels acted on November 26; the stool was pultaceous, small, and feculant; and diarrhœa, characteristic in appearance, developed on the 27th and, though never severe, continued until the end. The patient died on December 3, being the thirteenth day from the commencement of his illness.

Post-mortem examination.—Body fairly nourished. Brain and its membranes normal. The heart was slightly enlarged, and the mitral valve was rather thickened at the margin and somewhat opaque. The lower lobe of the right lung contained little air, and, as well as two-thirds of the upper lobe, was the seat of extensive hypostatic congestion. The left lung was the seat of similar engorgement, but to a much less degree.

At the lower extremity of the ileum, just above the ileo-cæcal valve, were two or three round sloughing ulcers, besides a single ulcer with sharply cut margins and smooth

December.
5. 6. 7. 8. 9. 10. 11. 12. 13. 14. 15. 16. 17. 18. 19. 20. 21. 22. 23.
Hours of Day.
2.8. 2.8. 8.2. 8. 2. 8. 8. 2. 8. 8. 2. 8. 8. 2. 8. 2. 8. 2

glistening base, evidently in the stage of healing. No other ulcers besides these occurred, but Peyer's glands and some of the solitary follicles, higher up the ileum, were obviously swollen and injected. The liver was swollen, rather firm, and of a pinkish colour. The spleen was large, swollen, and soft; it weighed 14 ounces. Both kidneys were greatly enlarged; on stripping off the capsule the surface of each was of a dark chocolate colour; on section the whole of these organs, both in their cortical and medullary portions, were much congested; they had a general red colour, most intense at the basal portion of the pyramids, which were almost black. The cortical part was obviously swollen, the congested vessels streaking the paler tubular tissue. Sections examined under the microscope showed the renal tubes to be distended with opaque granular epithelium, and between the tubules, both of the cortex and medulla, there was a considerable amount of small cell infiltration. The right kidney weighed 12½ ounces, the left 14 ounces.

Remarks.—I have thought this case of sufficient interest and rarity to justify me in bringing it before the Society. Although it is by no means uncommon to find albumen and even traces of blood in the urine in severe cases of typhoid fever, I never myself met with a case similar to that I have now narrated. When albumen is found in the urine of typhoid fever patients it does not usually occur until a more advanced stage of the disease; according to Liebermeister, not until the disease has reached its height; and, according to Dr. Murchison, rarely sooner than the third week. It is usually due either to congestion or to parenchymatous degeneration of the kidneys, not, as in this case, to acute nephritis. Again, Dr. Murchison says that when copious hæmaturia occurs in the course of typhoid fever it is for the most part associated with other hæmorrhages, whereas no other hæmorrhage existed in my patient. The only record of cases resembling the present one which I have been able to find is a reference by Liebermeister to the cases of two patients in the hospital at Basle, reported by Immermann, who died of uræmia, the result of acute parenchymatous nephritis, in the year 1872, soon after admission to the hospital, and during the height of an attack of typhoid fever. In reference to my patient I may add that the most careful inquiries made, both of the man himself and of his mother, failed to elicit the history of any previous illness, and the only evidence afforded by the post-mortem examination

which could suggest its existence was the trivial hypertrophy of the heart and the slight thickening of the margins of the mitral valve. These were, however, very slight; and though it seems difficult to believe that they could have taken place in so short a space of time, I am inclined to think that they were due to the very intense nephritis.

The points which appear to me of chief interest in the case are: the concurrence of typhoid fever with such severe nephritis, affecting both the tubules and the interstitial tissue of the kidneys; the entire absence of dropsy, and the intense and very severe and rapid course of the disease, which proved fatal on the thirteenth day from the appearance of the earliest symptoms of indisposition.

XL.—*A Case of rapid and almost universal Paralysis involving the four extremities, both sides of face, respiration, deglutition. Syphilitic history. Recovery.*

By Thomas Buzzard, M.D. *Read March* 12, 1880.

ON April 14 last, at the request of Dr. Slight, of Clifford Street, I visited Thomas O., a tailor's cutter, who was lying paralysed in lodgings. He was 44 years of age, and unmarried.

Finding that he was suffering from paralysis of all four extremities and of both sides of the face, which had been rapid in its onset, and was hourly increasing, I ordered him without loss of time to be removed to the National Hospital, Queen Square, where he was received under my care. The following notes of the case were taken in great part by Mr. A. E. Broster, resident medical officer: 'Patient is a medium-sized man, sparely built, whose mental condition is perfectly normal. His face is expressionless, being paralysed on both sides. He is unable to close either eye, a gap between the lids measuring about 5 mm. being left when he tries to do so. He is apt to bite his cheeks when eating, and the food accumulates between the teeth and cheeks on either side, but especially on the left. When he smiles there is just the faintest movement of the right angle of the mouth, but none of the left. The mouth is very slightly drawn to the right, and opens somewhat wider on that side than on the left. He cannot whistle, neither can he frown nor move the skin of his forehead in the slightest degreee. The saliva

runs from his mouth. There is complete paralysis of the external rectus muscle of each eye. The pupils (size of No. 5, Hutchinson) react well to light. There is the cicatrix of an old ulcer of the cornea. The tongue is broad, flabby, and somewhat tremulous. It is protruded straight, and is not apparently wasted.

He is unable to swallow solids except with the greatest difficulty; they stick in his throat, and he is obliged to drink to wash them down. He can take fluids well enough, and they never regurgitate through the nostrils. His voice is normal, the hyoid muscles act properly, and when asked to swallow the larynx is felt to rise apparently as freely as in health. The sterno-mastoid muscles seem exceedingly feeble and flaccid, and so does the platysma on each side.

Respiration is mainly upper thoracic, the lower part of the chest not expanding as it should, and the diaphragm scarcely, if at all, moving. The respiratory movements are not manifestly aided by the sterno-mastoids. There is no marked inequality of expansion on the two sides of the chest. There is some loss of control over the sphincter ani when his bowels are relaxed, and he is obliged to be quick when he wants to micturate.

Upper extremities.—By the dynamometer the right hand gives a grasp of 18 kilogr., the left 14 kilogr. He is just able to feed himself, but cannot dress himself. The muscles do not appear to be wasted. Tested with loaded balls it is found that he cannot judge of weights with his left arm, though he can do so tolerably well with his right. He is unable to button his clothes, nor can he hold an orange to eat it. 'His mouth seems to run away from it.'

Lower extremities.—Patient is unable to stand. As he lies he can move one foot across the other, but cannot lift either more than three or four inches off the bed. There is great muscular flaccidity. He does not know where his legs are in bed. The patellar tendon reflex was carefully tested on several occasions, and was found to be absent in both legs. There was no reflex clonus of the feet.

Cutaneous sensibility: Face.—Over the right side of the face there is complete loss of sensibility to touch and pain, with apparently increased (but, at all events, well-retained) sensibility to heat and cold. The loss of sensibility is likewise observed, though to a somewhat less extent, over the left side of the face, and also, though here again in a less complete degree, on his forehead. In these situations, again,

the sensibility to heat and cold is perfectly retained, and apparently, indeed, increased. Below the middle of the forearm there is almost entire loss of sensibility to touch and pain, whilst heat and cold are well recognized. Where the alteration in sensibility begins there is what the patient describes as a 'band-like feeling around the arm.' In the tips of his fingers there is a constant tingling sensation, and anything which he touches with them feels hot.

He cannot pick up a coin. In trying to take a shilling out of his trousers pocket he brought his hand out several times, thinking that he had it in his fingers, which was not the case. In his lower extremities sensibility is also greatly modified. Below the middle of the thigh, on each side, neither a touch nor the prick of a pin is recognized. Over the whole of both feet, as well as half-way up the legs and on the posterior surface of the rest of each lower extremity, sensibility to heat and cold appears intensified. To the soles of the feet water of the temperature of the air feels 'stone-cold,' as he terms it, causing him to draw his feet away sharply, from the discomfort it occasions. Heat appears also to be perceived in an exaggerated degree, but not to the same extent as cold. Over the whole of the trunk the cutaneous sensibility is normal. He has frequent pains in the calves, sometimes of a very sharp character, and the legs will twitch when they occur. At other times the pains are of a dull heavy character.

Spine.—No abnormality can be perceived in the spinal column. Percussion causes no pain or tenderness. He complains of a feeling of stiffness, but this is apparently subjective. On asking him to bend his back it is found that he cannot move it, but the attempt to do so causes some pain in the lumbar region.

Sense of smell.—Assafœtida and sumbul are recognized by the right nostril, but not in the slightest degree by the left.

Sight.—He complains of occasional muscæ. There is diplopia. A pencil held up is seen as two, about 5 inches apart, the false image to the left and parallel with the other. There is no hemiopia. The field of vision appears to be of normal extent. Examination by the ophthalmoscope discloses no change in the fundus oculi of either side.

Hearing.—Normal.

Taste.—He does not recognize salt or sugar on either side; says they both taste warm, and hotter on the right than on the left side.

Pulse is quick, temperature normal.

He complains of a good deal of headache in the right frontal region, spreading to the vertex. He has also sharp pains, sudden and of momentary duration, like a knife-stab, in the right thigh and knee. His sleep is not good.

Urine contains no albumen.

The patient shows no disposition to develop bedsores.

Such was the patient's condition when admitted into hospital. His illness had come on in the following manner: About a month previously the people with whom he lived say that they noticed his face to be drawn to the right. He had no idea of this himself, and for his part felt in perfect health till March 31, just a fortnight before I saw him. He then noticed a sensation of 'pins-and-needles' in his hands and feet. Although this feeling continued he was able to go about and follow his occupation, though with difficulty, till April 5.

On April 3, whilst walking across a street, he tried to hurry out of the way of a passing vehicle, when he found that his legs seemed to stick and refused to move fast—one as bad as the other. The same day he began to see double.

April 4.—In the same state. He still continued to go to work.

6.—Got up in the morning and walked to see his doctor (about two minutes' walk) with much difficulty. Succeeded in dressing himself. Could not work after this date.

8.—Could not walk. Had a dull aching pain along the hamstrings. Could not sleep. Found difficulty in swallowing meat. Very severe right frontal headache.

11.—Could not dress himself. The fingers were numb, so that he could not feel the buttons. At first there was no pain whatever in the spine on movement, but between the 9th and 14th he found, in stooping to the ground, an aching pain in the lumbar region.

At no time was there any vomiting.

There was no history of any blow, injury, or exposure to cold. He had not suffered from soreness of the throat, nor had he been brought in contact with any one suffering from sore throat. At the age of 24 he had a syphilitic chancre, the scar of which remains visible. Besides this he never had, he says, a day's illness.

There is no family history of gout, phthisis, or nervous disorder.

He was ordered to take 10 grains of iodide of potassium every four hours.

On April 15, the day after his admission into hospital, I found that reaction to the induced current was almost entirely absent in the muscles of the face, and also in the thenar eminences of each hand; it was lessened, though not to the same extent, in the muscles on the front and back of the forearm.

April 16.—There was a little more power in moving the external recti muscles. Two days later the sensibility of the face was decidedly improved; a touch could be felt on each cheek. There was still internal strabismus, but the external recti muscles could now move the eyeball three-fourths of its proper distance. He was now able to bend his back, when propped up, with scarcely any discomfort.

22.—Feels a touch on each forearm as well as ever he did, but a pin-prick below the middle is as yet only recognized as something hot. He can close his eyes better, though not effectually, and there is scarcely any abnormal deviation of the eyeballs. There are deep excavations in the interosseous spaces from atrophy of the muscles.

29.—Examined electrically. There is very slight reaction to strong induced currents in all the muscles of the lower extremities, and it is almost absent in the interossei and thenar muscles of the right hand. The electrical applications are only slightly felt in all the limbs. He now shuts his eyes perfectly, can show his teeth, and can whistle. The diplopia continues, but there is less distance between the images. He was ordered to be rubbed in daily with 3j of ung. hydrarg., and to take 15 grains of iodide every four hours.

May 8.—During the last week he has made rapid progress. There is now no diplopia whatever, and he reads with ease. The dynamometer gives with the right hand 20 kilogr., with the left 18. The sensibility of the hands and forearms to touch, pain, and heat has become normal. In the lower limbs, although he feels everything, the sensation is dulled. Of late his hands and fingers have tingled, 'as if asleep.' He cannot stand, but he moves in bed and manages to get on the nightstool by himself, which he could not do a week ago. There is no delay in the bladder. In the lower dorso-lumbar region there is still some stiffness and uneasiness in bending the back.

17.—He stood fairly for the first time, and, with help,

walked a few steps. There is still some pain in the lower part of the back on movement.

19.—It is noted that his taste is perfect, and that there is now nothing whatever wrong with the face or eyes. The grasp with the right hand measures 23 kilogr., with the left 22. He is able to button his clothes, feed, and dress himself. He is able to walk, but says the ground does not feel quite natural to him. His legs seem to spring under him. His gait was somewhat ataxic. He complains of a 'dull pain' in the lower limbs, which, when he moves them down sharply, seems to run up to his back 'and make his teeth chatter.' Says he draws them up to relieve the pain, and that when he attempts to put them down they feel stiff. He continues to take 15 grains of iodide every four hours, and is rubbed with ʒj of ung. hydrargyri daily.

20.—The gums becoming a little red and tender, the ointment was ordered to be used on alternate days only.

31.—Dynam.: right, 28 kilogr.; left, 23 kilogr. Improvement is continued.

June 27.—Dynam.: right, 31 kilogr.; left, 27 kilogr.

July 24.—He was discharged. The mercurial ointment was ordered to be discontinued; the iodide to be taken in doses of 5 grains three times a day. It was noted that the patellar tendon reflex was still altogether absent.

August 10.—Dynam.: right, 35 kilogr.; left, 33 kilogr. He can take a walk of three to four miles. The ground feels natural, and the legs do not spring. There is now decided patellar tendon reflex in the right leg. Three days later it was found also to have returned in the left leg. There remains a little numbness on the front of the left thigh and in the toes. Certain sharp momentary pains, 'like a very sharp knife,' which he used to have in the right thigh have nearly ceased, and there is now only a little aching in the back. He returns to his work well.

I may add that the patient has since continued regularly at his employment, and that he was to have been present here this evening.

Remarks.—In 1859 Landry described, under the name of 'acute ascending paralysis,' a condition characterized by paralysis mounting from the legs to the arms and the district innervated from the medulla oblongata. I may quote here the definition of the malady given by Erb, in his monograph on Diseases of the Spinal Cord, in Ziemssen's Cyclopædia: 'The

disease designated by the name of paralysis ascendens acuta is clinically characterized by a motor paralysis which generally begins in the lower extremities, spreads pretty rapidly over the trunk to the upper extremities, and usually also involves the medulla oblongata, which sometimes runs its course without fever, sometimes with more or less active fever, which but slightly involves the general sensibility and the functions of the bladder and rectum, and which runs its course without any notable atrophy of the muscles, and without any diminution or change of their electrical excitability. In the majority of instances the disease terminates fatally, by asphyxia, paralysis of deglutition, and the like; but lighter cases may end in recovery. The anatomical characteristics of the disease are at present purely negative. No pathologico-anatomical alterations are to be found anywhere, and especially not in the spinal cord, which might explain the picture of the disease. In particular there are no signs of hyperæmia within the spinal cord, of myelitis, of acute destruction of the ganglion cells or nerve fibres.'

'Exceptionally,' Erb remarks, 'the disease may be seen to progress downwards within the cord, instead of pursuing the more frequent ascending course. The paralysis then begins in the nerves of the bulb, and successively seizes first the upper and then the lower extremities. So in the case of the distinguished Cuvier, as reported by Pellegrino-Levi.'

If we come to examine details it will be seen that my case, although presenting a *primâ facie* resemblance to this disease, differs from it in certain essential particulars—

1. In the extensive and profound affection of sensibility.

2. In the greatly diminished (almost lost in the lower extremities) electrical excitability of the muscular system.

3. In the occurrence of paralysis of the external recti muscles.

Erb, as the result of a summary of the various published cases, remarks:—

'1. As a rule the very slight disturbance of sensibility is especially noticeable.

'2. The electrical excitability of the paralysed nerves and muscles remains entirely normal. In all the more recent cases, carefully investigated by skilled hands (Pellegrino-Levi, Bernhardt. Westphal, &c.), no anomaly of electrical excitability worth mentioning has been found, even after the disease had existed for a number of weeks. By this very means,' he adds, 'the disease seems to be distinguished in a

very significant manner from all progressive paralysis caused by gross anatomical lesions within the spinal cord (myelitis centralis, poliomyelitis anterior subacuta, &c.).

3. 'Actual paralysis of the muscles of the eye,' he says, 'has not been observed.'

In many respects the case resembles those described by Duchenne under the title of subacute spinal paralysis, but differs in the important circumstance that in Duchenne's cases there is no affection of sensibility. Indeed, they appear to be cases of what is now called subacute anterior polyomelitis.

In the present case it will have been noted that the first symptoms of disease occurred in the face. It was drawn to the right. This was followed a week or two afterwards by 'pins-and-needles' in the patient's hands and feet. A little later and there was loss of power in the lower extremities, followed in a day or so by weakness and numbness of his arms, paralysis of external recti, of deglutition, &c. So that the term 'ascending' would not be applicable.

On the other hand, the resemblance of this case to one which I had the honour of bringing before this Society in 1874 * is most striking. So remarkable was it that, struck by the extraordinary likeness, I did not doubt a similar result would occur; and when this man was admitted into the hospital I ventured—somewhat rashly, perhaps—to express my conviction to the medical officer, first, that a history of syphilis would be found; and, secondly, that the man would recover under appropriate treatment. The patient overheard my remark, and at once said, 'I had syphilis many years ago.'

In the case of W. H., to which I have referred, there was also double facial paralysis, weakness of one external rectus muscle, and anæsthesia of the face and extremities, almost complete paralysis of all four limbs, weakness of the bladder, partial paralysis of respiration, and deglutition. The man, as did this patient, changed in the course of a few hours from a condition of progressive worsening and imminent danger to life, from respiratory difficulty to improvement, under the iodide of potassium, and recovered completely in a few weeks. In my last case, as well as in this, it was necessary to consider whether a lesion of the pons varolii would suffice to explain all the symptoms experienced by the patient. In that case I came to the conclusion, principally on account of the marked constriction of the waist complained of, that the

* Clinical Society's *Transactions*, vol. vii., p. 75.

lesion was certainly not confined to the pons (although this centre was doubtless affected), but that there must be also another lesion, which I referred to the membranes within the spinal canal.

In the present instance, again, we are able to say with certainty that there must have been lesion within the spinal canal. This is shown especially by three symptoms—

1. The total absence of patellar tendon reflex.
2. The atrophy of the inter-ossei muscles.
3. The great diminution of reaction to the induced current in the muscular system.

None of these symptoms could be brought about by a lesion of the pons.

It will be noted that the lesion, whatever it was, affected as well the sensory as the motor side of the cerebro-spinal nervous system, and that not only was the electrical reaction of the muscular system greatly diminished, but there was muscular atrophy. On the sensory side the symptoms were threefold: cutaneous anæsthesia and shooting pains, which invaded the head as well as the limbs, and loss of muscular sense. The reflex activity of the spinal cord both as regards the skin and the patellar tendon was suspended. On the motor side there was partial paralysis of all four extremities, of the muscles of the back, of the diaphragm, and lower intercostal muscles, of both seventh and both six nerves, and of the sphincters.

It is evident, from a consideration of this wide extent of result, that there must have been a lesion either involving generally the grey matter of the cord, medulla, and pons, or else a meningeal change sufficient to exert compression simultaneously upon both the anterior and posterior roots of the nerves belonging to those portions of the cerebro-spinal system.

Now, we know that in acute poliomyelitis of the anterior cornua the lesion is confined in a remarkable way to the anterior horns, and it is exceedingly rare, therefore, for any alteration of sensibility to occur in that disease. But here the affection of sensibility was quite as strongly marked as that of motility; and if we would ascribe the condition to a myelitis at all it must be to an acute central myelitis, a poliomyelitis involving both anterior and posterior cornua, and not only the horns of grey matter in the cord, but also their analogues in the bulb and pons, which represent physiologically the prolongation of the spinal cord into the

cranial cavity. To say nothing of the fact that pathological anatomy, so far as I am aware, gives us no account of such a condition, it is to my mind improbable that such a complete recovery could take place as occurred in this and my other case from a lesion of this extent and gravity. It is a question whether anterior acute poliomyelitis ever clears off without leaving paralysis in at least one limb.

There is only one alternative, and that is some change in the pia mater—a meningitis, or, as I think, perhaps more probable, a state of obstructed circulation in the vessels of the membrane, dependent possibly upon some syphilitic thickening of the walls of the vessels, accompanied by some exudation involving the roots of the nerves, irritating some of them, so as to cause pain, and obstructing others by compression. But all this is purely hypothetical. The man recovered, as did the other case which I brought before this Society, and as did also a female patient who came under my care at the hospital, and whose case, though far milder, belonged to the same class.* I have also had another case of a female in private practice, who likewise recovered.

It is important to note that in three out of these four cases to which I have referred there was a distinct history of syphilis. In the fourth there are strong reasons also for suspecting it.

This was the case also in an instance of 'acute ascending paralysis' recorded by Dr. Arthur Fox, of Bath.† The patient was a prostitute, and there was a history of sore followed by eruption and sore throat. In her case the symptoms, which began with pains in the legs and loins, included incontinence of urine, followed by loss of power in the legs, extending shortly to the arms, and causing death in about a fortnight. In several essential points that case differed from this, especially in the existence of hyperalgesia and delirium, and the absence of symptoms referable to the nerves emanating from the pons and medulla oblongata. Very slight changes, if any, were found in the nervous structures post mortem by Dr. Shingleton Smith. 'Sections of the cord,' he reports, 'in the cervical region seem to have some increase in the connective tissue elements. The grey matter took the staining fluid more readily than usual, and some of the cells have a contracted appearance. . . . In the absence of any other morbid change the intense coloration (by the staining fluid)

* *Vide* clinical lecture on 'Syphilitic Paraplegia,' *Lancet*, April 5, 1879.

† *Vide Brain*, part vii.

is an indication of some minute and diffuse protoplasmic change such as would exist in the early stage of diffuse myelitis.'

In my previous case (W. H.) I was inclined to suppose that a pachymeningitis—an inflammation of the dura mater—lay at the bottom of the mischief, but from the symptoms presented by a patient who died of pachymeningitis some little time since (confirmed by autopsy) I am now disposed to think that the dura mater is not involved in such cases as that which I now bring before the Society.

The complete disappearance of the patellar tendon reflex, and its return during the patient's convalescence, are very interesting points in the case, and, so far as I know, this is the first recorded instance of the disappearance and return of the phenomenon in a case of this kind. The circumstance lends us important aid in diagnosis in regard to localization. We can confidently say that there must have been lesion within the spinal canal. It does not, however, enable us to clear up the difficulty as between acute diffuse myelitis and some change in the pia mater—meningitis, or otherwise. In the latter case, supposing that there were, as is possible, I think, a lesion of the roots of nerves sufficient to cause cutaneous anæsthesia, shooting pains, paralysis, muscular atrophy, and almost total absence of electrical reaction, it would be quite competent to obstruct also the reflex from the tendinous nerves. Nor, I think, does the interesting retention of sensibility—a hyperæsthesia, indeed—to temperature whilst touch, pain, and muscular sense were greatly in abeyance, help us to differentiate. The retention or exaltation of the sense of temperature alone, accompanied by some cutaneous anæsthesia as regards touch, is frequently seen in rheumatic perineuritis, and it is also present in two cases of hemiplegia under my care at the present time.

All the cases of this kind that I have seen have recovered, and I can add nothing positive, therefore, to the pathology.

It will be a source of satisfaction to me if the narration of this case, by tending to bring forward the experience of others, may help to elucidate a diagnosis which is confessedly as obscure as it is interesting.

XLI.—*Case of Fracture extending through the Temporal Bone in a child aged thirteen months.* By Frederick S. Eve. Communicated by Howard Marsh. *Read March* 12, 1880.

Robert W., æt. 13 months, was admitted to St. Bartholomew's Hospital on the evening of October 16, under the care of Mr. Smith, who has kindly permitted me to bring forward the case.

His mother stated that he had fallen off a bed, and had struck his head against a mangle. On admission he was pale, apparently insensible, and very sick. The pupils acted to light. There was bleeding from the right ear. Pulse 84, respiration 30.

October 17.—The bleeding from the ear had ceased, but there was a profuse discharge of clear watery fluid. Temperature 99·2°, pulse 150.

18.—The flow of clear fluid from the ear continued, and was very profuse. The child lay in a somnolent condition, but cried when disturbed. Morning temperature 101·1°, pulse 135; evening temperature 102·6°.

19.—During the night he was restless and gave frequent short sharp screams. Temperature 102·2°, pulse 128, respiration 68. After 3 o'clock the child was frequently convulsed, and died at 11 p.m. The watery fluid continued to escape from the ear up to two hours before death.

Post-mortem examination.—Lymph was found effused in the subarachnoid space over the whole surface of the brain, but most abundantly over the right hemisphere. A fracture, commencing just below the squamous suture, passed vertically through the squamous portion of the right temporal bone and external auditory meatus. It extended through the petrous bone, in its course passing across the tympanum, in front of the semicircular canals to the internal auditory meatus, apparently traversing also the base of the cochlea. From thence the line of fracture extended to that portion of the foramen lacerum posterius, which transmits the eighth pair of nerves, and upwards again to the lower surface of the external auditory meatus. The temporal bone was, therefore, divided vertically at the level of the external and internal auditory meatuses. The fracture did not extend

beyond the temporal bone. The membrana tympani was divided in the same direction by a rent, the lower portion of which presented a large perforation; the upper portion was glued together by lymph. The bones of the internal ear were not disturbed. The lining membrane of the tympanum and anterior mastoid cells, which were laid open, was thickened and covered with lymph.

Remarks.—The case related presents some points of interest. Fracture of the base of the skull at so early an age (13 months) appears to be of extremely rare occurrence, partly owing probably to the elasticity of the bones, and partly to immunity from injury. The situation of the fracture indicates that it was produced by the impulsion of the spinal column against the occipital bone. The child probably fell upon the right side of the vertex of the skull; the weight of the falling body, transmitted through the spine, would thus be thrown upon the right condyle of the occipital bone. The fracture started, as described, from the immediate neighbourhood of the condyle, taking its course through that portion of the base of the skull which is weakened by the numerous cavities and foramina it contains.

As another instance of fracture of the base of the skull, which occurred in the same manner, I may mention the case of a child æt. 4 years who died in St. Bartholomew's Hospital from injuries to the head produced by a fall from a first-story window. On examination several fissured fractures of the vault were found. In addition a fracture extended from either side of the foramen magnum, one of which passed upwards through the temporal bone, but did not join the fracture of the vertex, stopping at the squamous suture. The fractures of the vertex and the base were, therefore, produced by two distinct forces. In the case first related the discharge of watery fluid from the ear commenced almost immediately after the injury, and was throughout very profuse.

I was able to demonstrate by injection what has already been proved by analysis and dissection, that it is the cerebro-spinal fluid which escapes from the ear. I inserted a cork into the external auditory meatus, through a hole in which a canula was passed. A coloured injection thrown gently by this means into the tympanum ran out freely from the internal auditory meatus, issuing from within the sheath of the nerves.

Perhaps this mode of investigation would demonstrate

the origin of the fluid in those cases in which the fracture does not extend through the internal auditory meatus.

As already mentioned, there was arachnitis extending over the entire surface of the brain. It appears possible that the inflammation may have been induced by the rapid secretion attending the draining of cerebro-spinal fluid from the ear.

XLII.—*A Case of Femoral Aneurism, treated by Ligature of the External Iliac Artery. Recovery.* By H. H. Clutton. *Read March* 12, 1880.

So much has been said by different surgeons about the uncertainty of catgut for the ligature of vessels in continuity, and so much doubt at present exists as to what is the best material to be used, that every case of ligature becomes important. In the case reported below, which was treated antiseptically, thoroughly carbolized silk was used, and the two ends were cut short, in the hope that with antiseptics the silk would become encapsuled. Considering the number of silk ligatures that are now often used in a case of ovariotomy in this manner, and the few, if any, that have subsequently appeared by suppuration or otherwise, it did not at first sight seem too much to expect from antiseptics that the silk might become encapsuled in the tissues around the artery as efficiently as has been the case in the peritoneal cavity.

W. F., æt. 46, was admitted into St. Thomas's Hospital on December 9, 1878, with an aneurism of the right femoral artery, of about the size of a walnut, immediately below Poupart's ligament. It had been first noticed three or four months before. There was no history of injury or syphilis to account for its formation. There was slight arterial degeneration, but no marked affection of the heart. He was placed under the influence of iodide of potassium and a restricted diet. Every variety of pressure was tried, with the exception of the compression of the abdominal aorta, but they all failed. Under these circumstances the external iliac artery was ligatured antiseptically on January 11, 1879, with a thoroughly carbolized silk ligature, of which the two ends were cut short. When the ligature was tightened pulsation entirely ceased. A catgut drain was then inserted, and the wound closed with silver sutures. Pulsation in the

anterior and posterior tibial arteries returned in three days. As the temperature remained normal, and there was no sign of any serous or sanguineous oozing, the dressing was not removed for a week; the wound was then (January 18) found completely closed, and the catgut drain lying loose in the dressing. All the sutures were then removed. Slight pulsation could, however, be felt in the sac. The dressing was reapplied and left undisturbed for another week. The temperature still remained normal, and the wound at the end of the second week (January 25), when the dressing was removed for the second time, was soundly and firmly healed. The dressing was therefore discontinued. The pulsation of the aneurism, however, continued, varying from time to time in its character, till February 15 (five weeks after the operation), when he was suddenly seized with pain in the right groin, and an hour afterwards the aneurism was found quite solid, with the pulsation scarcely perceptible. The tibial arteries also at the foot could no longer be felt. In a few hours more the cure was completed, and not the slightest movement could be detected in the aneurism. This seemed to be the termination of the case, for the wound was still quite soundly healed. The consolidation of the aneurism, it is true, had been rather delayed, but this recurrent pulsation has been found to continue for much longer periods than five weeks, and yet aneurisms have in such cases eventually become solid. But on February 23, exactly six weeks after the operation, there was slight pain and swelling in the wound, and a few days afterwards a thimbleful of sero-purulent fluid was evacuated from the centre of the cicatrix. This little opening continued to discharge only sufficient fluid to keep a scab of about the size of a split pea adherent to the centre of the scar. In this condition he left the hospital, on March 15, with the caution carefully to watch for the little loop of silk.

On May 22, four and a half months after the operation, he came to the hospital with the silk loop in his hand, and the wound again soundly healed without any scab.

Remarks.—The hope that the ligature would become encapsuled was frustrated, and yet the case was typically an antiseptic one! The wound healed without any inflammatory symptoms—without, indeed, one drop of pus—and the highest temperature recorded was 99·6°, which was twenty-four hours after the operation; in fact, the wound healed throughout by first intention; but the ligature eventually

caused suppuration, and was discharged as a foreign body.

Now, in this there is no difference at all, as far as one can judge, from the cases recorded by the older surgeons, in which the ligatures, after they had thus been included by the rapid healing of a wound, eventually made their way to the surface by a process of suppuration. Consequently it came to be the custom to leave one end attached to the loop, so that the ligature might be withdrawn when its work had been completed. Professor Lister, however, tried by his antiseptic method to procure the encapsulation or absorption of the loop cut short ('Lancet,' April 3, 1869, and pamphlet in the same year). He was dissatisfied with the result, although in a patient upon whom he had tied the external iliac artery for femoral aneurism, and who died ten months afterwards of an aortic aneurism, the silk loop was found partially disintegrated and absorbed, signs of chronic inflammatory mischief in the shape of a minute drop of puriform fluid being visible around the remains of the silk ligature. He was led then to make experiments with his carbolised catgut: experiments which are well known to the profession. With an extended experience, however, it has been proved that catgut, though practically safe for the ligature of arteries in the face of a stump, is not yet free from risk and danger when used for the ligature of an artery in continuity. What, then, can we say of the use of silk ligatures in the operation of ovariotomy? The results far surpass anything that could have been anticipated. Silk ligatures have now been left in great numbers in the peritoneal cavity, and no bad consequences have thereby ensued. Mr. Doran's dissections of two cases in which he had an opportunity of examining the pedicle some months after successful ovariotomy ('St. Bartholomew's Hospital Reports,' 1877, vol. xiii.) prove that the silk ligature is in some cases at any rate absorbed, and that the distal part of the pedicle cut off by the ligature is saved from gangrene by bridges of inflammatory material passing over the ligature. How, then, are we to explain the want of success in ligaturing an artery in the same manner? Is it possible that there is so much difference between leaving a ligature free in the peritoneal cavity and leaving it under similar circumstances in the cellular tissue? In both it encloses tissue, which it destroys; only in the peritoneum there is a distal portion in addition which under ordinary circumstances one would expect to die. And yet in the peritoneum

we hear no more of it, while in the cellular tissue it reappears upon the surface of the body, working its way out by a slow inflammatory process. In the case before us also the ligature was not placed amongst the muscles of a limb, where a certain amount of movement must take place, but in the iliac fossa; thus differing only from the ligature of the ovarian pedicle in its position with regard to the peritoneum. In the case of the artery the ligature is in the subserous tissue; in the case of the ovarian pedicle the ligature is lying on the endothelial surface of the peritoneum. In this fact, no doubt, is to be found the explanation of the different results obtained.

XLIII.—*A Case of Spontaneous Gangrene of the Thumb and Fingers of the Right Hand.* By Thomas Smith. *Read March* 19, 1880.

A DELICATE girl, æt. 3, was admitted into the Children's Hospital, September 19, 1879, under my care. She was subject to cough, and complained of pain in the feet and legs when walking. Three months since her feet were liable to become cold and livid, with some swelling, after standing or running about.

She was admitted for an abscess in the upper part of the thigh, which was opened antiseptically on September 23, and ran a favourable course during the progress of the gangrene. She was moderately well nourished; her thorax showed signs of rickets; the spleen was palpable. At the time of admission her left hand was noticed to be cold, and bluish in colour.

On October 4 the right hand and fingers became cold, and bluish-green in colour, the discoloration extending an inch above the wrist; beyond this some distance up the forearm was an erythematous blush. The brachial artery could be felt to pulsate at the bend of the elbow; the pulse could not be felt at the wrist (probably from the swelling, as it was easily felt two days later, when the swelling had subsided). Her pulse was 144, and the temperature ranged between 100° and 102°. In the course of a day or two blebs formed over the hand and fingers, and a line of demarcation became evident on the proximal side of the first row of knuckles. The drawing, taken on October 10, represents the condition of the parts. The child regained her normal temperature on

October 14, and no abnormal rise occurred for three weeks afterwards, when for nine days there was considerable elevation, coincident with the occurrence of carboluria, and ceasing with the abandonment of the carbolic dressings to the abscess.

During the latter part of November the thumb and all the fingers separated, with the exception of the third finger, which, though dead, remained attached. The patient has long since regained her ordinary health, and is now in a much better general condition than when admitted.

Remarks.—I cannot account for the occurrence of gangrene in this case. The child seemed to be one who was used to have occasionally cold and blue-looking hands and feet, and, apparently, on one occasion by some accident, the chilling in one hand passed beyond the limit whence recovery was possible. She was warmly clad, and in bed the whole time, well-fed, and cheerful, nor could we discover any signs of renal disease, cardiac mischief, or arterial embolism.

XLIV.—*Two Cases of Congenital Cystic Hygroma.* By Thomas Smith. *Read March* 19, 1880.

I HAVE ventured to bring these cases before the Society, since they are typical instances of a somewhat rare disease, occurring in its favourite situation. Both patients were cured—the one as the result of a blow, the other by the passage of carbolised catgut setons through the growth—and in both the cure has come about by inflammation, causing consolidation and subsequent contraction of the spongy texture of the tumour, and by obliteration of the contained cysts.

The first case was admitted, under my care, into the Children's Hospital, September 20, 1878. The patient was a girl, æt. 3. The tumour had been noticed at birth, when it reached from the elbow into the axilla and up to the clavicle, and on to the thorax as far as the sternum. It grew slowly until the child was $1\frac{1}{2}$ years old, when it became inflamed from a blow; this checked its growth, and it did not increase until four weeks before admission, when it received another blow.

On admission the whole tumour was acutely inflamed, as represented in Plate X.; the child was very ill, the temperature ranging between 102° and 104°. The surface was hard and shining-looking, as if it must necessarily slough.

Under treatment in three weeks' time the local inflammation had much subsided, and the general temperature had sunk to 101°.

In a month the tumour was shrinking rapidly and becoming more solid. This process continued, with occasional interruptions, from temporary outbreaks of inflammation in one or other part of the growth, for the next three months. The child finally left the hospital five months after admission. At the present time (January 1880) the disease may be said to be cured, as there now remains nothing but some shrivelled skin and thickened areolar tissue on the site of the original growth.

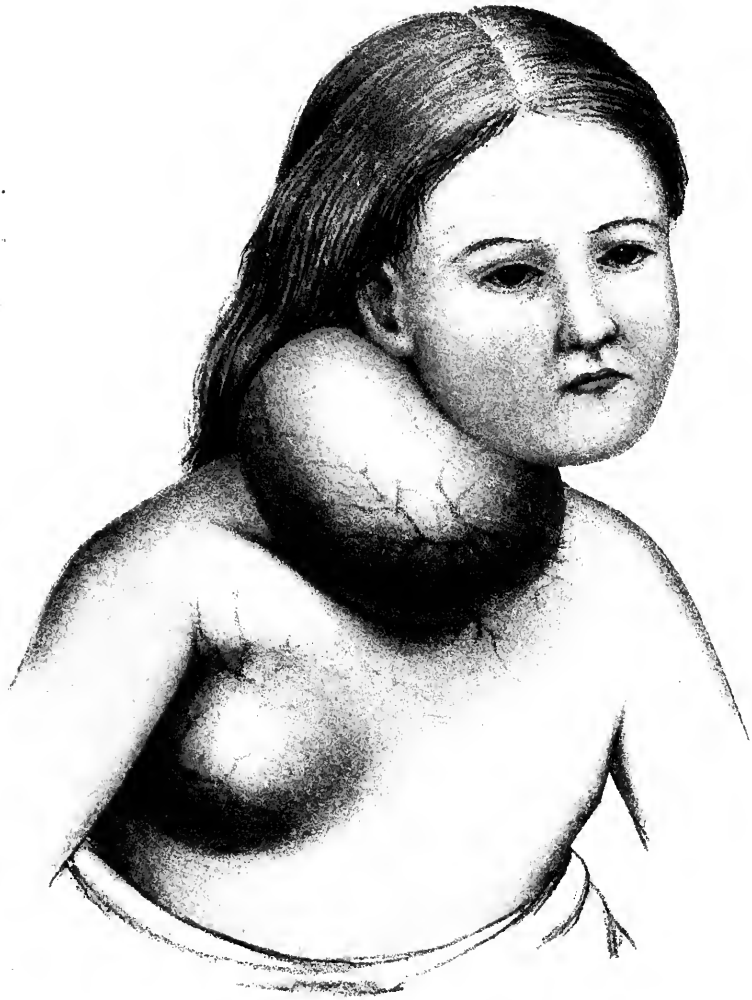
The second case is that of a girl 2½ years old, admitted August 20, 1878. Her disease, which is represented in Plate XI., was a typical example of a cervical and axillary hygroma, reaching from the lowest part of the axilla to the external auditory meatus, extending beneath the clavicle, and bulging out in the neck and axilla into large globular cystic swellings, translucent, having a bluish tinge, and being streaked over with veins; laterally the swelling reached from the cervical spine to the sternal notch.

In the substance of the growth, just below the angle of the jaw, was a hard lump, but the main bulk of the swelling seemed to consist of two large cysts in the neck and one in axilla, with some solid matter.

On August 28 I introduced three coarse carbolized catgut setons into the cervical swelling. On the third day the cysts had begun to inflame, and the temperature had risen to 104°. At the end of a week one seton came away, and the other two were removed; the growth was moderately inflamed, and the temperature was 103·6°. In a fortnight the tumour was smaller, and a little pus flowed from the seton-holes. From this time her progress was much the same as in the first case—occasional attacks of inflammation in the tumour, with rise in the general temperature, followed by a subsidence of symptoms. Six weeks after the introduction of the setons, matter was let out from the posterior part of the axillary swelling; at the end of nine weeks some discharge took place from the cervical part of the swelling; in eleven weeks a small abscess opened in the lowest part of the axillary swelling; three weeks later another abscess opened; four weeks after this yet another abscess opened. During all this time the child was very ill, although, perhaps, not so severely ill as was the former patient; yet, apparently, occasionally

E. Burgess del. Mintern Bros, Chromo-lith.

Mr T. Smith's cases of Congenital Cystic Hygroma.
E. M. æt. 3.



T. Godart. del. Mintern Bros, Chromo-lith.

Mr T. Smith's cases of Congenital Cystic Hygroma.
E.W. æt 2½.

in peril of her life. She was discharged, after being in the hospital six months, with the tumour consolidated and rapidly diminishing in size. At the present time (January 1880) it may be said to be cured, the swelling having entirely disappeared.

Remarks.—In 1866 I published a paper on Cystic Hygroma in the 'St. Bartholomew's Hospital Reports,' and collected certain cases. Since that time I have had unusual opportunities of seeing the disease and of watching its progress, both under treatment and when left to itself.

When left to itself one cannot but be struck by its capricious progress—at one time growing rapidly, at another remaining quite stationary; again diminishing in size or, perhaps, disappearing altogether.

In some tumours a single cyst may be increasing in size and becoming tense while another is drying up and contracting; or, again, one cyst of a large growth may inflame, become tense, burst, or contract spontaneously, or the same process may attack the whole growth.

In my former paper I recommended the treatment of the single cysts of a tumour by fine silk setons as on the whole the safest and most efficient remedy, and I am not disposed, from additional experience, to alter my opinion, though I think carbolized catgut a better material for setons than silk. I cannot remember to have seen a removal by the knife that was not followed by a very unkindly healing of the wound, and occasionally by worse results.

It would probably be worth while to try the injection of Morton's iodo-glycerine solution in the simple cysts, which also are easily and safely treated by a seton.

Both the patients brought before the Society this evening were severely ill during their stay in the hospital; indeed, it would be difficult to say which child was in most danger. The child in whom the setons were passed was six months in the hospital, while the child whose tumour inflamed as the result of accident was five months under our care. The tumour has been most satisfactorily cured, as regards its complete disappearance, in the case treated by setons.

XLV.—*A Case of Intrathoracic Sarcoma.* By F. De Havilland Hall, M.D. *Read March* 19, 1880.

H. A., æt. 19, a clerk, admitted into Bouverie Ward, Westminster Hospital, on December 5, 1879.

Family history.—Father died, æt. 42, of smallpox; mother alive at 50. Five sisters and one brother alive and well. Maternal grandfather and uncle died of phthisis.

Personal history.—Enjoyed good health up till nine weeks ago, when he caught cold while playing at cricket. His illness began with languor and loss of flesh (about a stone); shortness of breath on exertion and slight cough, but with no expectoration, followed. He has never had hæmoptysis. He has had some tenderness and slight pain and uneasiness in the left side, and has had some pain in left shoulder, but the pain has not been excessive, nor has he felt very ill. Six weeks ago he gave up work and applied to a doctor, who told him that he had pleurisy, and who blistered him and gave him calomel and opium. Since November 28 he has been very sick.

General appearance.—Patient always lies on left side; height, 5 ft. 5 in.; weight, 8 st. 5½ lbs.; complexion pale, skin warm and moist, nails normal.

Alimentary system.—Tongue clean, appetite variable, has nausea and retching, bowels regular, liver dulness increased downwards.

Respiratory system.—Right side, good resonance, with puerile breathing. Left side immovable; marked rounding and bulging of interspaces. Vocal fremitus not quite absent. Absolute dulness to second rib, transgressing the median line, resonance boxy above second rib; posteriorly, dulness to spine of scapula, tympanitic above. Breath sounds inaudible, except faintly at apex and along spine; a faint creak audible at angle of scapula.

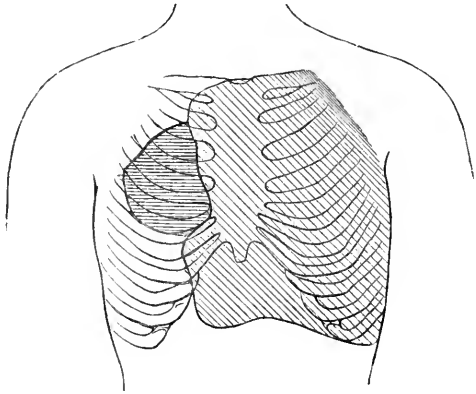
Circulatory system.—Heart's impulse one inch to inner side of, and one inch below, right nipple, sounds clear.

Urine not albuminous.

Dec. 7.—Slept well after 3 A.M. Pulse 104, regular, somewhat feeble. Respiration 24; only very slight cough. Dyspnœa during the day, reported to be marked at night. Dul-

ness now extends up to clavicle across the sternum, along the third rib to right nipple, and thence passing into liver dulness. Patient was tapped with hypodermic syringe in two places, and then with aspirator in the fifth interspace, parallel with anterior axillary boundary; no fluid followed, the end of the instruments being blocked up with a little 'cheesy' flaky matter.

8.—Patient being under chloroform, he was again tapped in fifth interspace, with hypodermic syringe, and some blood withdrawn. Mr. Gould then made an incision, 2 inches in length, along the upper border of the sixth rib, in the mid-axillary line; on introducing his finger into the pleural cavity he found a mass of 'cheesy material' in every direction as far as the finger could reach; he removed some of this mate-



rial; then, having tried again for fluid with the hypodermic syringe in the second and third interspaces, about 3 inches from sternum, unsuccessfully, he placed a drainage tube in the opening and covered it over with protective carbolic gauze, strapping, and bandage; the whole operation having been done in strict accordance with Lister's principles. Pulse 120 after the operation.

8.30 P.M.—Mr. Gould renewed the dressing; some bloody discharge from the wound.

9.—9 A.M. Pulse 112. Had but little sleep—disturbed by one of the patients. Is free from pain; has had very little pain from the operation. No appearance of discharge beyond the dressing. Bowels acted twice; tongue moist, clean.

10.—Had a good night. Pulse 120. No discharge having soaked through dressing, the wound was not dressed. Appetite good. Tongue moist, slight fur.

12.—Slept well last night. Less dyspnœa. Can now lie on right side. Is in no pain. Pulse 116, better volume. Tongue slightly furred. Ate a chop for dinner. Wound dressed.

14.—Felt thirsty yesterday, and had a bad night on the 12th; last night, however, he slept well. Tube removed yesterday; a slight amount of discharge, with an unpleasant odour, escaped.

15.—As the discharge had soaked through the dressing during the night, and was smelling somewhat offensively, Mr. Gould removed the dressing, washed out the cavity with carbolic lotion (1 in 20), then applied the antiseptic dressing under spray; a small quantity of bloody fluid escaped from opening; no pus. Pulse 112, better volume than heretofore. No complaint of pain.

16.—Slept well last night—better than he had done since admission. Wound dressed by Mr. Gould; very little discharge, and quite sweet.

17 and 18.—Wound dressed.

19.—Wound dressed by Mr. Gould; a small quantity of inoffensive discharge. A patch of herpes on right upper lip.

20.—Patient easy. Wound dressed.

21.—Patient suffering from shortness of breath; has coughed up a little frothy rusty sputa.

22.—Patient in a collapsed condition, suffering greatly from dyspnœa. Had a very bad night. Pulse 102, soft, compressible. Respiration 39. A small amount of sputa, partly frothy, partly rusty, tenacious. Wound dressed; small quantity of healthy pus. A patch of dulness at right base; abundant mucous râles up to angle of scapula. Breathing tubular over dull area on right side. Some bronchial breathing all over left back to axillary line. Had a very alarming attack of dyspnœa after the examination. Heart's impulse outside right nipple.

23.—9.30 A.M. Very restless night, constantly wanting to get out of bed. Is conscious; very cyanosed. Pulse 116, hardly perceptible. About 2 ounces of viscid frothy sputa, slightly streaked with rusty sputa. Rales all over right back. Died at 10.45 A.M.

The quantity of urine for two weeks was as follows:—

Date.	Quantity of urine.
Dec. 6	10 oz.
„ 7	7 „
„ 8	20 „
„ 9	31 „
„ 10	34 „
„ 11	28 „
„ 12	20 „
„ 13	18 „
„ 14	24 „
„ 15	25 „
„ 16	14 „
„ 17	18 „
„ 18	19 „

As regards the patient's temperature, which was taken every six hours, it may be remarked that the lowest daily temperature, which was generally at 8 A.M., varied from 98° to 99°; whereas the highest temperature was usually recorded at 8 P.M., and varied between 99·4° and 101·2°. On the two last days of his life there was a distinct elevation, doubtless due to the pneumonia. The quantity of urine passed daily was below the average, varying from 10 oz. to 34 oz. But these points will be more clearly seen by referring to the tables I hand round (see chart on Plate IX.).

Post mortem.—Rigor mortis present in all joints. Left side of thorax bulged; rounded prominence in epigastrium. Circumference of thorax at level of mammæ $31\frac{3}{4}$ inches (R. $15\frac{1}{4}$, L. $16\frac{1}{2}$); at 4 inches above the umbilicus circumference $32\frac{1}{2}$ inches. A surgical wound, 2 inches long, oblique in direction, in fifth left interspace in axillary line. On opening abdomen a mass about the size of a fœtal head was found attached to the upper surface of the left lobe of the liver, the lower edge of which was 8 inches from tip of ensiform cartilage, and 4 inches from costal edge in right mammary line. On removing the sternum and costal cartilages an enormous mass was found completely filling the left side of the thorax, lying between the reflections of the pleura (*i.e.* in the pleural cavity), pressing down the diaphragm to level of eleventh rib in left mid-axillary line, and extending 2 inches across the median line of the sternum at the level of second rib.

The pericardial sac lay wholly to right of mid-sternal line, its opposing surfaces uniformly adherent. The cardiac apex was opposite the lower border of fifth right costal car-

tilage, 2½ inches to right of mid-sternal line; the apex was firmly adherent to, and implicated by a portion of the new growth which had perforated the pericardium and pleura.

The inner margin of the base was opposite the junction of second right rib, with its cartilage. The outer border of right ventricle extended 5 inches to right of middle line at level of fourth rib, curving inwards to cardiac apex.

In right auricle small quantity of loosely clotted blood, in appendix, an adherent fibrinous clot. In right ventricle a a firm fibrinous clot and some fluid blood.

In left auricle a few drachms of fluid blood; in left ventricle a firm fibrinous clot extending through aortic opening and also through the mitral opening into left auricle; some fluid blood escaped on section of inferior vena cava; aortic and pulmonary valves competent. The surfaces of right pleura firmly adherent all over; the left pleura adherent to tumour.

Right bronchi contain a quantity of turbid sanguineous fluid. Lobes of lung adherent to each other (interlobar pleurisy). Right upper lobe congested, slightly crepitant, floats. Middle lobe the same; lower lobe hard, non-crepitant, no fluid on pressure, sinks in water; appearance of damson cheese on section. Left bronchus presents a slit-like opening from pressure of tumour. Left lung collapsed, lying in apex of pleural cavity, a narrow strip of lung tissue reaching as low down as eighth rib, close beside vertebral column; in the extremity of this part there were a few emphysematous lobules, evidently due to unequal pressure. On section the lung was soft, non-crepitant, contained no fluid, and resembled spleen in appearance. Behind the parietal pleura along the spine were a number of nodular prominences, varying in size from a pea to a chestnut, on section white and soft (secondary growth from tumour). The left lung was firmly attached to the tumour, but was nowhere implicated by it. On section through the new growth the upper fourth was found to be glistening, pale yellow, and of gelatinous consistence; the middle two-fourths, measuring 4 inches, consisted of an upper stratum of caseous material and a lower one of softened portions of the tumour infiltrated with black clots, the whole of pulpy consistence. The finger, passed through the opening in the left axilla, came upon this portion of the tumour. The lower fourth was firm, and white on section and had not commenced to degenerate.

The capsule of the spleen was thickened, and adherent

to diaphragm; on section the spleen was pale, soft, and friable. The left kidney congested, surface smooth, capsule separates readily. The right kidney in similar condition. The liver was normal in appearance; it was not invaded by new growth. The suprarenal capsules were normal. There was about half a pint of fluid in the stomach, the mucous membrane of which appeared normal. The brain was not examined.

Dr. Heneage Gibbes kindly prepared some sections of the tumour for me, and it is a fair specimen of round-celled sarcoma. Mr. Butlin kindly examined the specimen with me, and agreed as to its being round-celled sarcoma; there is not sufficient reticulation to regard it as a case of lympho-sarcoma.

Remarks.—In looking back over this case the points which strike one as being of peculiar interest are the following:—

1. The extremely short history of illness given by the patient. That he must have been in a fairly robust state of health nine weeks before he came under my notice may I think, be inferred from the fact that he was able to play cricket. On further inquiry I found that he was one of the best players in the office in which he was employed.

2. Read by the light of the post mortem, the account given of the beginning of his illness was hardly that of a typical case of acute pleurisy, as he stated most distinctly that he had had some pain, but that the pain had not been excessive nor had he felt very ill. Still, with the physical signs of effusion apparently so clearly marked, it can hardly be wondered at that the case was assumed to be one of pleurisy in spite of the history.

3. The physical signs were in every particular those of an extremely large pleural effusion, with one exception, and this exception was a sign not, I believe, invariably to be relied upon in pleural effusion. The exception I allude to is that of vocal fremitus, which was not quite absent over the affected side. Dr. Allchin pointed out to me that the fremitus was somewhat delayed after articulation. In other respects the physical signs were those usually given as characteristic of pleural effusion, namely, rounding, bulging, and immobility of the affected side, a dull percussion-sound passing the middle line in front, and an amphoric note about the clavicle and first rib. Total suppression of the respiratory sounds, except close to the spine and at the apex of the lung. Depression of the diaphragm, and displacement of

the heart. Moreover, there were no signs of centripetal pressure, the trachea, œsophagus, and large veins escaping encroachment. These, I take it, are the physical signs we should expect to find in a case of pleural effusion, and not those usually met with in tumours of the mediastinum or pleura.

4. The rapid growth of the tumour, as shown by the increase in the area of dulness and the displacement of the heart which took place under observation. When I first saw the patient the impulse of the heart was felt an inch to the inner side, whereas the day before his death the impulse of the heart was found to be about an inch outside the nipple.

5. The great mistake I made in this case was omitting to examine microscopically the 'cheesy flaky matter' which blocked up the aspirator on December 7. Still more unfortunate was the omission to make a careful microscopical examination of the 'cheesy material' removed by Mr. Gould on the 8th; but my mind was so engrossed by the fixed idea of fluid that I neglected an obvious means of diagnosis, which would have enabled me to state before death the exact nature of the disease, and the hopelessness of any further operative procedure.

6. As regards the original seat of the sarcoma, it is difficult to localise the exact point of departure; it was clearly a primary sarcoma of the thorax, as the only other deposits were beneath the left pleura. I believe that it sprang from the anterior mediastinum. According to Virchow the original seat of these sarcomata can seldom be ascertained, but it seems probable that they originate in the lymphatic glands of the mediastinum, or those about the root of the lung or in the thymus.

XLVI.—*Three Cases of Sympathetic Ophthalmitis setting in Three Weeks after Excision of the other Eye. With abstracts of Cases already published.* By Edward Nettleship. *Read April* 9, 1880.

THE occurrence of inflammation of one eye caused by disease of the other, but setting in after its enucleation, is so rare, and at the same time of such interest, both in its practical bearings and in regard to the etiology of the disease, that I think it desirable to communicate the two

following cases, in which this result has unfortunately happened in my own practice. I have also to thank Mr. Cowell and Mr. Mackinlay for permission to add the notes of a third case which has lately occurred in the practice of the former gentleman at the Westminster Ophthalmic Hospital. So far as I know, only about six cases of the kind are on record, and of these abstracts are given at the end of this paper. I have heard the occurrence mentioned in conversation with several surgeons, but in such, as well as in the majority of the published cases, the interval between the excision of the damaged (exciting) eye and the onset of sympathetic inflammation in its fellow has been very short, only a few days. The special point of interest in my own and Mr. Cowell's cases is the much greater length of this interval.

Case I.

Removal of a shrunken fluid Cataract from an unsound and irritable eye; loss of vitreous; severe intraocular hæmorrhage forty-eight hours later. Enucleation ten days after extraction. Sympathetic inflammation of other eye with neuro-retinitis, irido-cyclitis, and glaucoma, beginning twenty-two days after enucleation. Eye lost.

Charles Wilson, a pale, very nervous phthisical lad of 20, applied at the hospital on May 21, 1879, for advice respecting his right eye. I found complete white cataract with a large chalky-looking anterior polar (pyramidal) opacity projecting somewhat forwards, a large central nebula of the cornea, with some pigment on its posterior surface, the eye rather irritable and T. doubtfully +. From the history it is probable that he had purulent ophthalmia in infancy with perforation of cornea, and pyramidial cataract, and that the whole lens became gradually opaque during the next nine or ten years. I strongly advised him to have nothing done, but he was so anxious that the appearance of the eye should be improved that I consented to operate.

May 23.—Attempted downward extraction under ether; lens fluid, but shrunken, and (though the capsule was certainly not wounded by the knife) escaped as soon as the iris forceps were introduced; a considerable escape of vitreous followed the iridectomy. During the next twenty-four hours neither vomiting nor pain, but the lids became a little swollen.

25.—Morning, some pain; two leeches. Evening, sudden severe pain.

26.—Wound plugged by dark blood-clot, which, when snipped off, allowed the escape of a large quantity of dark fluid blood from the eye. Serous chemosis at lower part and a little swelling of lids. The pain ceased, and no fresh symptoms occurred. The eye was excised on June 2, ten days after the operation, and eight after the occurrence of the bleeding. There was not the slightest symptom of sympathetic affection of the other eye. The wound healed as usual, and he left the ward about three days later.

The excised globe, after being hardened, was found full of blood, chiefly in a thick layer between sclerotic and choroid, extending from the attachment of the ciliary muscle in front almost to the optic disc; on removing the blood the venæ vorticosæ, and further back some of the ciliary nerves, were seen traversing the interval. There was a thinner layer of blood between retina and choroid, and also some in the vitreous; the wound was plugged partly by clot, partly by firm altered vitreous. Sections were made of the optic disc and surrounding parts, numerous sections of the ciliary nerves just behind the sclerotic being included. There was very great increase in the nuclei of the nerve-fibre layer of the retina, and in the optic disc and nerve as far as the sections extended; the change seemed to affect chiefly the nuclei proper to the nerve fibres, for the lamina cribrosa and the fibrous septa between the bundles of nerve fibres in the nerve trunk behind it showed little or no increase, nor were the nuclei specially related to blood-vessels. The nuclei in the optic nerve varied much in size, and were for the most part rather pale, oval or rounded, and finely granular, quite different from those of the intervening connective tissue. The disc was not at all swollen. The choroid close to one side of the disc was densely crowded by round pus-like corpuscles; elsewhere it was thickened and corrugated, but showed no marked inflammatory changes. In the sections of ciliary nerves, a considerable space was often present between the nerve and its fibrous sheath, and the axis cylinders were usually less distinct, and yet looked thicker than in healthy sections taken at the same part. As the specimen was, however, hardened in weak alcohol instead of Müller's fluid, these changes may have been due to the action of the reagent. In many parts there was a considerable collection or infiltration of cells in the tissue just external to the ciliary nerves, but the nerves themselves did not show any appreciable increase of nuclei.

On June 24 (twenty-two days after excision, and thirty-

two after cataract operation), whilst lying in bed in the morning the patient noticed that a dimness gradually came over the sight of the remaining (L.) eye; at first it was almost blind, but sight returned almost perfectly in about ten minutes. Next day it again became dim, and continued to get rather worse till his visit a week later (July 2). He noticed that it was generally worse in the morning.

July 2.—Mr. Davidson noted slight ciliary congestion, V. $\frac{20}{70}$ and 14 Jaeger, T.n, disc hazy and very indistinct, retinal veins enlarged and rather tortuous.

3.—I saw him and noted discoloration of the lower part of aqueous, V. $\frac{20}{50}$ and 14 Jaeger, T.n.; pupil only dilates to $7\frac{1}{2}$ m.m. under atropine, oval upwards, and a ring of whitish opacity on lens-capsule; vitreous appears normal, disc more hazy, but not much swollen; no hæmorrhage or white patches.

4.—Readmitted to ward. Atropine every two hours, blue pill gr. ij. three times a day, black bandage, codliver-oil and quinine and iron. Urine free from albumen and sugar. Dr. H. U. Smith reported heart natural, but incipient phthisis at R. apex.

7.—Less congestion.

11.—Congestion almost gone, but abundant keratitis punctata in the usual pattern, with rather large spots; cornea itself clear; no opacities visible in vitreous, but fundus seen with difficulty; an elongated retinal hæmorrhage near disc. V. H. $\frac{1}{13}=\frac{20}{50}$; + 7 reads words of 6 Jaeger. Seton inserted in temple.

12.—No salivation; subcutaneous injection of pilocarpine (gr. $\frac{1}{10}$) repeated daily till 18th (seven injections). First injection caused sweating and some salivation for half an hour. Next morning was well salivated.

14.—Mouth very sore; take one pill daily.

17.—Omit pill. He was kept more or less salivated almost without intermission for about ten weeks. In the early part of this time the eye was usually better when his mouth was sore, but towards the end this coincidence ceased, and a severe exacerbation came on whilst he was well salivated. Throughout the attack the congestion varied very much from day to day.

August 26 (after a month's salivation).—Punctate deposits on cornea quite gone; pupil as before, partially dilated (about 5 m.m.); texture of iris not much altered; details of

fundus now invisible, probably owing to haze of vitreous, though no separate opacities can be seen.

September 1.—Relapse of congestion and pain.

11.—Seton has cut out.

23.—Relapse, much congestion, cornea steamy, aching pain. Four leeches; reinsert seton behind ear.

24.—Very severe pain referred to head; no sleep last night.

25.—Intolerable pain, continued all last night and to-day, in L. side of head; no pain in face.

29.—Under croton chloral the pain quickly ceased. Eye still much congested. This relapse occurred during salivation, and when the weather had suddenly become colder; probably he caught cold.

A few days later, the eye having again quieted down, he was discharged to his home, with careful directions, the mercury being stopped. The anterior chamber was shallow, and T. rather +, and remained so till his re-admission for iridectomy early in the present month (January 1880). Whilst attending as an out-patient the eye became on the whole quieter, and V. improved a little; the ciliary region became dusky as the redness passed away, and the eye appeared elongated by ciliary stretching. About Christmas the sight began to vary very much from day to day, and before iridectomy I made out that the disc was pale and cupped, and that there were disseminated patches of choroidal disease (atrophy?). At the operation the iris was soft and 'rotten,' but not firmly adherent, and a good piece was removed. *P.S.* The anterior chamber did not reform, T. remained +, and the eye has slowly become quite blind.

Case II.

Wound or rupture of sclerotic close to cornea, united by suture immediately. Enucleation nineteen days after accident, no sympathetic symptoms being present. Serous iritis, opacities of vitreous, and detachment of retina setting in twenty-three days after enucleation. Good recovery with subsidence of retinal detachment. Toxic symptoms from use of duboisin drops.

Henry Lee, 67, carpenter, wounded or ruptured his left eye with his screwdriver on February 20, 1879. Admitted at eye department one hour afterwards. A moderately large

wound of sclerotic and conjunctiva at upper part, just behind sclero-corneal junction (the usual seat of rupture) with prolapse of iris. The anterior chamber contained blood, but as there was good perception of light, and the wound was of only moderate extent and quite fresh, I determined to try to save the eye. When the prolapse of iris was cut off some vitreous escaped; a single suture was inserted in the sclerotic, and the patient put to bed with constant iced compresses to the lids. Operation finished in less than two hours from the accident.

21.—Slight pain and chemosis.

22.—More chemosis, conjunctiva snipped.

27.—Considerable muco-purulent discharge; chemosis as before; nitrate of silver.

March 3.—Less chemosis; doubtful perception of light. Discontinue ice.

4.—Suture removed.

6.—Doubtful perception of light; discharge continues, T.—1. No trace of sympathetic irritation. Excision advised, as eye was evidently lost, but refused by patient.

11.—Infiltration of cornea near the wound; other symptoms unchanged. Eye excised (nineteen days after accident). No union of wound; cornea thickened and infiltrated; lens clear; some blood in vitreous and between retina and choroid, but choroid and sclerotic everywhere in apposition. Wound healed as usual, and in a few days he left the ward.

April 3 (twenty-three days after excision, and forty-two after accident) —He complained of some pain in the other eye. The eye, however, showed no external signs of mischief, and, as he was nervous and fidgetty, not much notice was taken.

On the 9th (twenty-nine days after excision), however, there was acute serous iritis, but without much affection of sight; eye much congested, anterior chamber shallow, T. ? +, cornea and aqueous clear, pupil active, but a synechia revealed at upper-inner part by atropine; iris tissue not muddy; some nuclear haze of lens; vitreous not thoroughly examined. V. (before use of atropine) $\frac{2}{0}$, Hm. $\frac{1}{30}=\frac{2}{50}$; $+\frac{1}{8}=1$ Jaeger. There was not much pain. He was a pale, lean, nervous old man, talkative and credulous; hair dark and scarcely turning grey; no rheumatism, gout, or syphilis. In the absence of any other assignable cause for the attack, I attributed it to sympathetic influence.

Ordered three leeches, and duboisin drops for the eye.

Next day (April 10) readmitted to ward, and duboisin to be continued every two hours.

11.—Two leeches. After a few applications of duboisin (gr. iv. to ℥j) he became so intoxicated and delirious* that the duboisin was discontinued, and none was used after 12th; toxic symptoms quite ceased on afternoon of 13th.

14.—Atropine (gr. iv. to ℥j) three times a day; two leeches. Though the atropine was continued for many days he had no return of toxic symptoms.

17.—Complains that he cannot see so well; has been in bed ever since admission.

21.—V. much worse, cannot count fingers. Congestion nearly gone; pupil round, but not fully dilated; large detachment of retina at lower and outer part of fundus. (Is quite sure that this eye has not been struck or injured in any way).

May 8.—V. improving, counts fingers at 4′, fixation central.

12.—Much better; V. H. $\frac{1}{30} = \frac{20}{100}$; + $\frac{1}{6}$ = some words of 14 Jaeger.

15.—Large detachment of retina still present at outer part and another at inner part, the two folds meeting at the top; the innermost fold is visible by focal illumination; opacities in lower part of vitreous; disc barely visible.

29.—Improving. Left the ward.

June 5.—V. + $\frac{1}{8}$ = 8 Jaeger well, and words of 4 Jaeger.

July 3.—Pupil oval and sluggish.

October 23.—Pupil sluggish; V. + $\frac{1}{8}$ = 8 Jaeger.

November 19.—V. as before. Examined under atropine. Nuclear haze and cortical striæ in lens; numerous small opacities in vitreous; no trace of retinal detachment in any part; patches of doubtful choroidal atrophy at periphery; disc and retinal vessels natural. Condition of sight sufficiently accounted for by the partial cataract which was present before the attack.

Case III. (Under the care of Mr. Cowell.)

Wound of Cornea by piece of wood, with adhesion of Iris. Purulent Cyclitis. Excision twenty-four days after accident. Severe Iritis setting in twenty-five days after excision. Recovery, with good sight. (*Notes by* Mr. Mackinlay.)

Robert D., æt. 11, was admitted into Royal Westminster Ophthalmic Hospital on September 20, 1879, under the care of Mr. Cowell.

* Published in the *Lancet*, Sept. 6, 1879. Case 2.

Patient was chopping wood three days before; a chip flew up, and he was struck by it on the right eye.

On admission, condition of right eye was as follows: A jagged wound through cornea, at its upper and inner part near the margin; one might almost say two wounds, one joining the other at a right angle to its centre. Globe was injected; no pain, but lachrymation and photophobia.

Mr. Cowell ordered fotus belladonnæ constantly. The next day, 21st, iris had acted to the belladonna, but there appeared to be a little tag of adhesion between the iris and cornea at its wounded part; lachrymation and photophobia, however, so great, that examination was made with great difficulty.

During the next eight or ten days the symptoms of irritation slowly subsided, and by the first week in October the photophobia and lachrymation were gone; although the globe remained much injected, it was getting soft, and there was a greenish-white reflex from the fundus. On October 11, the globe being still greatly injected, the green reflex more marked, T. — 3, and V. = nil., the house-surgeon, at Mr. Cowell's request, extirpated the globe (patient being under influence of ether); the coats of the eye were unfortunately opened during the operation, and the contents escaped. On October 15 the patient was discharged, and with no symptoms of irritation in the remaining eye. On November 26 patient came up from the country and was again admitted. He stated that his left eye had been bad about three weeks. He thought it was a cold, and had been attended by a doctor.

The condition of the eye was then as follows: Globe generally inflamed, but not excessively. The sclerotic vessels more injected than the conjunctival, and in the ciliary region more especially; no special pain, but lachrymation and photophobia. Iris rather muddy and not dilated. Mr. Cowell ordered fotus belladonnæ constantly, and guttæ atrop. gr. iv. once a day.

On November 29, iris had acted fairly well to belladonna and atropine; globe was less injected, and photophobia and lachrymation were also reduced. He was ordered to continue the local applications, and take mist. ferri c. quinâ ʒss. ter die. Is on full diet and extra milk.

From November 29 until December 17 the same treatment was continued, no marked change taking place in the appearances of the eye, but it seemed to be slowly (very slowly) quieting down, and patient was certain that he could

see better. He was now ordered two grains of hydrarg. c. cret. with two grains of quinine ter die.; the mixture to be discontinued, but the local applications as before.

On December 31 there remained only very slight injection of the globe, but iris was considerably bound down by lymph. Fundus could not be clearly seen with the ophthalmoscope. V=Jaeger 14 slowly. Patient left with guttæ atrop. gr. ij. ad ℥j. Has not been up from the country since he left hospital.

Abstracts of Published Cases of Sympathetic inflammation setting in after excision of the other eye. (*The numbering is continued from the Author's cases above given.*)

Case IV.

A woman, æt. 35; left eye lost by smallpox, staphylomatous and glaucomatous. No sympathetic inflammation, but, as the eye interfered with the use of the other, it was excised some months later. Five days after excision of left eye the right began to suffer from photopsiæ and attacks of cloudiness occupying entire field of vision and obscuring sight, vision being normal between the attacks. Examination showed haze of retina immediately surrounding disc and equatorial opacities in lens. Without further ophthalmoscopic change vision deteriorated considerably for a time; but (under blood-letting and mercury) the haze disappeared, and sight again became normal. But several months later cyclitis with increased tension set in, and passed after several remissions into a decidedly glaucomatous state, for which iridectomy was performed with complete success. The refraction of the eye altered repeatedly during the course of the disease.*

Remarks.—In Nagel's abstract it is not stated how long the left had been blind before excision.

Case V.

A man, æt. 35, admitted July 1874, one day after perforating wound of centre of right cornea and lens. Purulent kerato-iritis, followed by swelling of orbital connective tissue and persistent pain; excision six weeks after accident.

'A few days' after excision localised pale conjunctival œdema at inner part of left eye, with sight down to 15 Snellen at 100 feet ($\frac{15}{100}$), but no ophthalmoscopic changes.

* Hugo Müller, Inaugural Diss., 1873, quoted in *Nagel's Jahresbericht*, 1873, p. 316.

Four days later (September 15), neuro-retinitis, yellow-spot region being especially affected, with contraction of visual field, especially at upper and outer part. Vigorous antiphlogistic and mercurial treatment. In six weeks visual field larger, optic disc still hazy. Some superficial choroidal changes (perhaps caused by the swelling of the retina E. N.). In two months, sight 15 Snellen at 50 feet ($\frac{15}{50}$). In six months no contraction of visual field; sight nearly normal, reads 1 Jaeger. Two years after onset of attack the eye remained well. *

Case VI.

Excision for sclero-corneal wound, not a trace of sympathetic mischief having been present. Patient discharged apparently well. Two months later complained of photopsiæ, without defect of vision. Six months later neuro-retinitis, with general haze of retina, and sight down to 19 Jaeger. Final condition unknown. †

Remarks.—This case is so incomplete, and the interval between excision and observation of visible changes in the eye so long (about six months), that we must receive it with much caution. Even the interval between excision and the onset of the earliest subjective symptoms (about two months) is greater than in any other known case.

Case VII.

Patient, æt. 14, large wound of left cornea and sclerotic, with prolapse of iris and traumatic cataract by explosion of a glass bottle. Immediate excision refused. Wound healed, but eye was congested and painful from a day or two after accident until excision, twenty-seven days after, when it had begun to shrink. A large piece of glass was found in the globe. The excision wound healed in the usual manner. No trace of sympathetic affection had appeared up to date of excision, and six days after the operation the right eye was perfectly natural as to sight, accommodation, and condition of pupil. On ninth day after excision right showed commencing iritis, but no defect of sight. The symptoms increased, and 'gradually all the characters of a true sympathetic irido-choroiditis manifested themselves,' and against these all treatment was powerless. Active symptoms still

* Colsmann, *Berlin. Klin. Wochenschr.* 1877, No. 12.

† Mooren narrated this case, previously unpublished, to Colsmann, who gives it with his own case, *l. c.* 1877.

present eight months after onset; vision only 19 Jaeger with difficulty.*

Case VIII.

Perforating wound at outer edge of cornea by a file, inclusion of iris, wound of lens, and intrusion of an eyelash into anterior chamber. Excision four weeks after injury on account of severe ciliary pain, the other eye being entirely free from symptoms. Excision wound healed as usual.

On fourth day after excision the other eye became congested, and iritis soon followed, though sight remained normal. Energetic treatment with atropine and mercury, followed by complete cure. In the excised eye the ciliary body was detached from the sclerotic, and infiltrated with blood and cells, and the ciliary nerves showed accumulation of cells between their fibrillæ. †

Case IX.

An intemperate carpenter, æt. 35, received a rupture of his right sclerotic, near the outer-upper margin of the cornea, by a fist blow, on March 28, 1878. Dislocation of lens beneath conjunctiva, anterior chamber full of blood, and no perception of light on the day after the accident. Lens removed by division of conjunctiva. Some pain during the next few days. Thirteen days after accident eye very tender and no p. l. Fifteen days after accident eye excised. Discharged from ward five days later. No sympathetic symptoms of any kind were present at the date of excision.

From his subsequent statements it appears that on the day after his discharge from the ward the other eye became irritable. The onset of sympathetic *irritation* may, therefore, probably be put down at about six days after the excision (twenty-one days after the accident). He did not, however, attend again till a week after his discharge from the ward, when (twelve days after excision, twenty-eight days after accident) there was slight conjunctival irritation and watering, but vision normal, and the iris bright and active.

During the next three or four weeks the congestion varied, but was never severe, and was treated as conjunctivitis. During this time he was drinking.

* Pagenstecher and Genth, *Atlas of the Pathological Anatomy of the Eyeball*, pl. xxxviii., fig. 12 (1875).

† H. Schmidt, *Klin. Monatsbl. f. Augenheilkunde*, 1874, p. 179. *Nagel's Jahresbericht f.* 1874, p. 368.

On May 20 (thirty-eight days after excision and fifty-three days from the accident), photophobia and considerable ciliary congestion, but pupil dilated widely to atropine.

23 (forty-one days after excision and fifty-six days from the accident).—Iritis and opacity of vitreous, with wide dull ciliary congestion, V. p. l. Readmitted.

Treatment.—Calomel vapour baths to gentle salivation (nineteen in first nineteen days, ten in next three weeks), and occasional artificial leech. No improvement for first month, then rapid complete recovery, and discharged with normal vision two months after onset of iritis. Four months after his discharge V. remained $\frac{2}{20}$ and 1 J. held in the hand.*

Remarks.—There can, I think, be no doubt that the disease of the second eye in these cases was sympathetic. The only question which arises is whether the morbid process in the second eye was caused by the damaged eyeball, and had, before excision, travelled so far towards the healthy eye as to be out of reach; or was set up in the divided orbital structures by the operation.

The presumption is strongly in favour of its having been set up by the damaged eyeball, and not by the operation for its removal. There is scarcely room for doubt on this subject in those cases where the disease sets in only a few days after the excision, since it is, I believe, generally agreed that sympathetic *inflammation* scarcely ever begins sooner than about two weeks after the injury or disease which gives rise to it. In cases like some of those I have mentioned, where the interval was from three to six weeks, it must, however, be admitted that there was time enough for the disease to have occurred as the consequence of the excision, supposing this to be possible; but the following considerations seem to make it improbable that such is the case: If, in consequence of excision of the eyeball, changes could be set up in any of the orbital structures capable of originating sympathetic disease in the other eye, then we should expect sometimes to see the disease coming on at very long intervals, even several years, after the operation, and this, I believe, is unknown. Again, if the sympathetic disease were caused by the operation of enucleation, we should expect it then to be equally severe and destructive as in the ordinary cases caused by disease of the other eyeball. This, so far as we know at present, is not the case, for, amongst eight cases of post-operative

* Mr. Brudenell Carter's case, reported by Mr. McHardy, *St. George's Hospital Reports*, vol. ix., pp. 496, 505, 508 (1878).

sympathetic inflammation of which the history is complete, we find that recovery (usually perfect) took place in six, and blindness in only two; this proportion of recoveries is much higher than in the ordinary cases. Then, again, in all the nine cases under notice the excised eyeball was in a state very likely to set up sympathetic disease. And, further, in none did any inflammation of the orbital parts occur after the excision, it being often expressly stated that the parts healed just as usual. It is true that in my own cases the scissors used happened to be loose at the hinge, and did not cut well, and that in Mr. Cowell's case the soft parts of the orbit were probably, in consequence of the eyeball being cut into, rather more disturbed than usual; but we have no reason for attributing to these facts any share in the later events. Lastly, the comparative mildness of the disease when it *follows* enucleation seems to show that the removal of the damaged eye, even after sympathetic inflammation is already declared in the other, may not be so useless as it is often held to be, and that the improvement of the sympathising eye which sometimes follows this proceeding is not a mere coincidence, but is really due to the removal of a persistently acting cause. Far from weakening our faith in the efficacy of enucleation as a preventive of sympathetic ophthalmitis, the cases now brought forward will strengthen us in insisting upon the *very early* removal of every eye which is spoiled for useful sight and is likely to set up sympathetic disease.

In both my own cases the sympathetic disease showed some unusual features. In case II., although the iritis was mild, extensive and deep detachment of the retina was present for a time. In case I. the earliest symptom was failure of sight, and neuro-retinitis was for the first few days almost the only change. It is remarkable that in three of the six published cases the disease began in the same unusual manner. In such cases, where the earliest visible changes occur in the optic disc and retina, it by no means follows, however, that the morbid process has travelled along the optic nerve. Inflammation of the choroid near to the optic disc generally gives rise to more or less of neuro-retinitis, and such a choroiditis might be expected if the ciliary nerves were, as is generally supposed, the paths by which the inflammation reached the eye. That the neuro-retinitis was in truth communicated from the adjacent choroid, and was not primary in the optic nerve, appears all the more probable from the fact that the anterior parts of the uveal tract (ciliary body

and iris) almost invariably participated to a very marked extent in the inflammation.

XLVII.—*Some Cases of 'Bone-setting,' with Remarks.*

By Howard Marsh. *Read April* 9, 1880.

Case I.

A MAN, æt. 50, fell, and dislocated his shoulder. The dislocation was reduced without either difficulty or delay, and the arm was bandaged to his side, in the usual manner. I first saw him nine weeks afterwards. The head of the humerus was in the glenoid cavity, and the joint was free from heat and swelling, but so stiff that the patient could not move his elbow more than three inches in any direction; the limb from the shoulder to the elbow ached so much at night that he had but little sleep, and if it was jarred or suddenly moved he cried out with pain. On examination, when the humerus was turned on its long axis its head was felt to move with perfect freedom in the glenoid cavity through about one-sixth of a circle, but a wider range made him cry out, and so did any attempt I made to bring the elbow from his side or carry it backwards. He had little pain when the elbow was brought some six inches forward upon the chest. He complained of severe aching of the arm when the limb was allowed to hang down, and he had the habit of supporting the forearm with the opposite hand. When he had taken gas the scapula was fixed, and the humerus was freely rotated on its long axis in the glenoid cavity. During this proceeding numerous adhesions were felt and heard to give way. Then the arm was carried, in a series of short quick jerks, through all its natural range forwards and backwards, and then raised so that the elbow was nearly on a level with the top of the patient's head. It was thought that more could not be done on this occasion without some possibility of damage to the axillary vessels. The manipulation was followed by four or five hours of considerable pain, but this gradually subsided, and the patient found that he had almost completely lost the aching of the arm which had previously been so troublesome.

A fortnight later he was seen again. He was much better, and had returned to his work, but he still had pain on certain movements of the arm, especially in an upward direction.

He therefore took gas again, and the elbow was carried above the head as far as it should naturally go. After this his pain left him, and he recovered the full use of his limb.

Case II.

A man, æt. 24, came a few months since to St. Bartholomew's Hospital for advice about his ankle. Eight months before he had, in jumping from a cart, fallen with his foot twisted under him. Great pain and swelling followed the accident, and the limb, from the instep to the middle of the calf, came out, he said, all black and blue. He was laid up for a fortnight, and then took to walking with the help of a stick. From that time till he came to the hospital the joint remained swollen, and the seat of severe pain when weight was thrown upon it. He was thus quite crippled. He had gone from hospital to hospital, and had been liberally supplied with bandages, liniments, elastic stockings, and the inevitable tincture of iodine, but nothing had done him any good. On examination the ankle was found free from unnatural heat—indeed, it was unnaturally cold—the skin was smooth, glossy, indistinctly dusky and tight, as it often is around the border of a chronic ulcer, and the outlines of the joint were obliterated by chronic brawny swelling, which, however, was nowhere very considerable. The heel was a little raised, and the movements of flexion and extension were almost entirely lost. When he had taken gas the foot was carried by a series of jerks, but with the use of very little force, for the resistance was very slight, into full flexion and full extension, and the tarsus was also manipulated as if to move its various parts upon each other. While this was being done there was the sensation that adhesions were giving way, and numerous slight cracks and snaps were felt and heard. Within an hour the patient was walking with scarcely a limp. Next morning he walked from Hackney to the hospital; he reported himself cured, and had already applied for work under his former master. Six months afterwards (on January 27 of the present year) the patient returned to the hospital with his ankle again out of order; he said that since the manipulation he had been at work, and had felt no inconvenience till within the last three weeks, when the joint had become stiff and weak, and so painful under any weight that he was very lame. On examination neither heat nor swelling nor any marked defect of move-

ment could be detected. He was therefore told that manipulation would do him no good, that he had overworked the joint, and had better have it strapped and give it a week's rest. When this advice was given he looked disappointed and puzzled, and said that his joint felt just as it used to feel when he was laid up before, and that he believed if it was moved again he should be 'all right.' This was an appeal to which, as manipulation could do no harm, it seemed unfair not to yield. He took gas, and the ankle was flexed and extended. When flexion was being performed some adhesions, which, however, were slight, and which offered scarcely any appreciable resistance, were felt to give way. He left the hospital an hour or two afterwards, and the next morning wrote, 'I have had enough travelling on my foot to convince me that it is wonderfully better by my being able to walk without *pain* or *limping*' (he had underlined these words), 'which might seem strange, but it is a fact.' I have not seen him since.

A case similar to this is printed in the 'St. Barth. Hosp. Reports' for 1878. A man, æt. 45, could bear no weight on his ankle nine months after a sprain. All his symptoms disappeared when the limb was bent, and in less than a week he was quite well.

Case III.*

A. B., a delicate lad of 17, was sent up from the country with a suspicion of hip disease. He was so lame that he walked with a crutch and stick, and could bear very little weight upon the limb. The thigh was held in a position of slight flexion, abduction, and external rotation. He complained of deep-seated pain at the back of the joint on any movement, and of tenderness on pressure in this situation. No swelling could be detected. On careful examination it was found that the hip-joint was sound, but it was believed, from the situation of the pain and tenderness, and from the position of the limb, that the case was one of strumous periostitis of the innominate bone beneath the external rotator muscles. He was advised to rest for three months, to have a succession of blisters, and to take cod-liver oil. At the end of this time he was no better; his condition seemed to be wholly unaltered. His friends now took him to a bone-setter, who, after examining him by passing his hand under his

* This case, with the appended note, is extracted from the article referred to above, in the 'St. Barth. Hosp. Reports.'

trousers, pointed to a spot on the thigh, four inches directly downwards from the anterior superior spine of the ilium, where, he said, 'a bone was out.' At the request of the boy's mother he put the bone in by movement of the limb, a snap being heard during the manipulation.* The patient could now move his limb freely, and walk upon it with only slight pain, which disappeared in the course of two or three days, and left him quite well. Just twelve months later, having in the interval remained quite sound, he was asked while at breakfast to cut some bread, and while in the act of rising quickly from his seat he was suddenly attacked with his old trouble. He had intense pain in the old spot, and felt sick and faint. The limb was found to be locked in its former posture, and he had intense pain if he threw any weight upon it. Getting no better, he was brought to London at the end of a fortnight. The limb was then stiff, slightly flexed and abducted, and he walked very lame with his crutch and stick. Movement of the limb at once brought on very painful spasmodic contractions of the muscles, and he suffered severely at night from muscular startings and twitchings of the thigh. No swelling could be detected, but he had excessive pain on pressure over the neighbourhood of the sciatic notch. Having heard how he was cured before, I put him under the influence of gas, and gently carried the limb through all its natural range of flexion, extension, abduction, adduction, and rotation. I felt nothing give way, and nothing seemed to slip; but when the patient recovered from the gas all his symptoms had disappeared. He could move his limb freely, and in a few days he lost both his lameness and all his pain. He has had no relapse. This case is a very interesting one. When first seen it was very obscure; yet, when all the symptoms had been carefully considered, the diagnosis of periostitis seemed grounded on very strong probability. Looking back on it, and noting what subsequently occurred, I think, however, it must have been an instance in which one of the deeply placed muscles or tendons had, on a sudden movement, slipped out of its place.

* The loud snap which is often heard when a joint that has long been stiff or at rest is suddenly moved, is a phenomenon to which bone-setters point as a plain demonstration that a bone was out and has been put in. Such a snap was heard in the case of A. B., and it was this which had convinced the boy's mother that the surgeon had overlooked a dislocation which the bone-setter had detected and reduced. These snaps, however, are not produced by the concussion of two joint surfaces as they come suddenly into contact, but, on the contrary, are due to the sudden separation of two surfaces which have been stuck together by a too viscid and tenacious synovial fluid. Many persons can make all their fingers 'crack' by steadily pulling at them till the joint-surfaces suddenly separate.

Remarks.—Many of us are aware that sometimes patients whom surgeons have failed to cure are cured by bone-setters, a main part of whose treatment is known to consist in the use of force to overcome resistance to movement. Such a circumstance shows that something has been overlooked, and that there must be cases in which the value of forcible movement has not been quite fully appreciated. Sir James Paget was the first to draw attention to this subject by giving a clinical lecture on the cases that bone-setters cure. This was published in the 'British Medical Journal' as long ago as 1867, and is now embodied in his volume of clinical lectures and essays; while in 1871 Dr. Wharton Hood gave his lectures on bone-setting, which appeared at the time in the 'Lancet,' and were subsequently issued in a separate form. These writers, stripping the subject of the obscurity, not to say mystery, with which in the eyes of many it seemed to be enshrouded, and discussing it in regard both to pathology and treatment, have satisfactorily explained how it is that bone-setters sometimes do good. Since the appearance of the papers I have mentioned surgeons have found many occasions for further investigations, and, as it seems desirable that from the information thus gained some general rules should be laid down, I have ventured to introduce the subject for discussion at this Society. Having employed the method, as far as opportunities have occurred in the course of hospital work, it has certainly appeared to me to deserve attention. I believe we must not only allow in general terms that manipulative treatment may perhaps in certain cases be more useful than many have supposed, but must accord to it an altogether different position, and regard it as a means by which we may cure, both safely and quickly, a considerable number of cases which cannot be cured by any other method that we are at present acquainted with. Here, however, I must remark that by manipulation is not meant simply a wrench and nothing more. A mere wrench will cure some cases; but many require the subsequent use of daily passive movements, hot douching, and shampooing. The value of these accessories is so great that I believe before long a shampooer will be considered a necessary official in the surgical wards of hospitals.

In the work already mentioned is given a list of the cases in which bone-setters may do good. Some of these, such as ganglionic swellings about the carpus and tarsus, which they disperse, and hysterical joints, which they move,

may be passed by; they present nothing to engage the attention of this Society. As to luxation of the bones of the carpus and tarsus it seems safe to say that such an accident is far too rare to afford bone-setters many chances of success. Displacement of tendons—a third set, referred to by Dr. Hood—is an occurrence well known to surgeons. Mr. Curling has, it will be remembered, recorded a case of slipping of the peroneus longus over the external malleolus. Sir James Paget has met with displacement of the peronei, of some of the tendons at the back of the wrist, and of the extensor tendon of one of the fingers, and he alludes to displacement of the tendon of the popliteus. Mr. Callender wrote on the subject; Hamilton gives instances; and Broca, in the 'Bull. de l'Acad. de Médicine,' 1874, mentions displacement of the tendons of the tibialis posticus, biceps and triceps of the arm, rectus femoris, sartorius, plantaris, and peronei. It is very likely that the twists which bone-setters practise may occasionally replace one of these tendons which has slipped, and case III., which I have read, seems to have been one of slipping of one of the external rotators of the femur. Such an accident, however, must, I think all surgeons will agree, be very rare, and can, therefore, offer but very few occasions for bone-setting. We come now to an important class, namely, slipped cartilages; but I shall venture to enlarge the group to which Dr. Hood alludes under this heading by adopting the term originally employed in his admirable description of this accident by Hey, namely, internal derangement of joints. I do this in order to include cases that are of no rare occurrence—which in fact, as I believe, are more numerous than slipping of the inter-articular cartilages themselves—the slipping and pinching between the articular ends of the bones of hypertrophied fringes of the synovial membrane, or of masses of cartilages formed in the synovial membrane as the result of chronic inflammation. In a considerable number of joints that have been the seat of subacute inflammation, originally started by an injury, and perhaps several times repeated, the synovial membrane becomes overgrown and tufted, and masses of cartilage, or fibro-cartilage, are here and there developed in it. These masses, if they are single, and if they at length become detached, rank as loose cartilages; but in other instances they remain embedded in the synovial fringes, and being thus anchored, as it were, out of reach, are not recognized. They are from time to time caught and nipped, and the joint is then the seat of pain and

restricted movement. Such joints bone-setters may sometimes put right, just as they may those in which an interarticular cartilage itself has slipped, by flexion and rotation, so as to separate the articular surfaces, and set the impacted fringe or the nodule of cartilage free. My impression, from cases which I have seen, is that this condition, especially in the knee, is sufficiently common to render it necessary that all surgeons should be—as many are—carefully on the watch for it. Of the use of bone-setting in rheumatic and gouty joints —Dr. Hood's sixth class—my experience extends no further than to have occasionally moved joints, stiff either after smart attacks of rheumatic inflammation or after injury in rheumatic patients. No unfavourable result has followed. In all these cases, however, structural changes have been very limited. How far forcible movement is likely to be attended with benefit in joints considerably changed by rheumatic or gouty inflammation I will not venture to say. The question is one of much practical interest, and I hope some information respecting it may be obtained in the course of this evening's discussion.

With this cursory notice of the preceding groups I pass to the cases which are by far the most important. Indeed, it is in these alone that bone-setting presents anything calling for observation. I refer to the cases in which joints are stiffened, disabled, and rendered painful by adhesions developed in and around them.

Adhesions are known to form about joints after injury and inflammation. They are sometimes very extensive, and are associated with profound structural changes and degenerations of the joints, the result of prolonged disease; but, on the other hand, they may be very limited, and occur in joints that are, both as to themselves and their surrounding soft parts, structurally sound. Several instances have lately been met with in which, to judge by their sequel, joints damaged by severe sprains have remained disabled for many weeks, indeed, even for months, simply by a few slight adhesions. In the same way a joint after dislocation (as in case I.), or after fracture of one of the bones forming it, may be thus disabled. Especially will this be the case if the surrounding muscles have suffered atrophy by a too long confinement in splints and bandages. Now, it is in this group of cases—of joints hampered by adhesions—that forcible movement, coupled, if need be, with hot douching and shampooing, proves itself eminently valuable. The amount

of success to be obtained will, of course, depend on the circumstances of each case. Until a comparatively recent period forcible movement has been chiefly used in cases in which fibrous ankylosis has followed long-continued inflammation. In these instances considerable force has to be used, and afterwards passive movements, rubbing, &c., are necessary. But even if these means are completely carried out the degree of success that can be secured is frequently very disappointing. In spite of all that can be done stiffness is prone to return. But in cases in which adhesions are slight, and—as I believe they often are—*chiefly outside the joint*, forcible movement has sometimes an almost magical effect. When the patient is under the influence of gas these adhesions give way with great facility, and the functions of the joint are very quickly, or even then and there, regained. Probably no one doubts the existence of these adhesions about joints; but the question which, from a clinical point of view, it seems very important to discuss is, whether they are occasional and exceptional, or whether they are of common occurrence. I can myself have no doubt that they are common, and may often be found in any surgical ward or out-patient room. I believe they are common enough to afford that modicum of genuine success without which bone-setting, bolstered up though it be by the numerous follies of belief which lend it their support, could not maintain its reputation in face of the frequent instances in which it does either no good, or less or more serious mischief.

The information I have gained as to the clinical features of cases appropriate for forcible movement is far too limited to justify me in an attempt to offer any complete rules; but all that I have been able to observe has fully accorded with Sir James Paget's teaching—that the joints best fitted for it are such as, after injury, have remained stiff, weak, and painful, and yet free from abnormal heat, beyond the usual period of convalescence, and which have no history of previous disease, and in which a very careful examination can detect no evidence of any of the diatheses, such as scrofula or severe gout or rheumatism. Especially is it called for in cases in which the stress of the accident has fallen on the parts around the joint, rather than on the joint itself. For several cases have shown that if synovitis has followed an injury forcible movement is very apt to reproduce it, even though many weeks have elapsed, and though the joint has become quite free from heat and swelling.

As to the particular joints which are suitable for forcible movement I can say but little. Good results, however, have been obtained in the shoulder, the hip, the knee, the ankle, and the finger-joints. I have not used it for the elbow, having met with no case in which it appeared called for. And as to the method of performing forcible movement time will only permit me to say that the main rule seems to be to carry the joint, by a series of short jerks, in all directions, through its full natural range, particularly in any direction in which movement seems especially limited. This can generally be done, in favourable cases, when the patient is under gas, by the use of comparatively little force. If adhesions are so extensive that considerable force is required, the prospect of doing much good is generally small. Even a partial success can then be obtained only by the prolonged use of passive movement and careful shampooing.

XLVIII.—*A Case of Acute Rheumatism with Ulcerative Endocarditis. Multiple Embolisms. Death on tenth day.* By R. SOUTHEY, M.D. *Read April* 23, 1880.

PHŒBE GREENWOOD, æt. 26, a pale but well-nourished and well-made young woman, with talipes of left foot, was admitted under my care in Faith Ward for rheumatism; and on June 27, 1879 (seventh of disease), she was extremely feeble, and complained of a good deal of pain in various parts of her body, aggravated by the smallest movements; she was, therefore, carried upstairs by the porters, and required much assistance in undressing.

She was apparently rational, and answered questions put to her intelligently; but she spoke with difficulty, from shortness of breath, and her breathing was in a marked degree shallow and rapid.

How far this rapid breathing was due to emotional disturbance and nervousness only I could but surmise; and I attributed some part of it to this source, for I knew her of old. She had been six times previously in hospital, and twice in Faith Ward, under me. She was subject to hysterical fits, and had had several previous acute attacks of rheumatism.

All the history of her present illness that could be elicited went to prove that she was taken ill with 'pains rheumatic,' as

she called them—and she ought to have known—on June 20, and had been confined to her bed since that date. Her mother had observed her to be delirious for several nights past, and it was in evidence that one night she had fallen out of bed.

Her antecedents did not seem to have been happy. She had married; had had one child and a miscarriage; had lost her husband fifteen months previously; and, according to her mother, had solaced her grief with brandy.

Condition on admission.—She was rational, but rather deaf in the right ear. There was considerable swelling and tenderness in the right parotid region, with thickening of the ligaments about the glenoid cavity. She could only open her jaws a very little, spoke thickly in consequence, and could show very little of her tongue; this, however, was moist.

There was pain on movement, and tenderness in her right knee, but neither redness nor effusion. Several of her knuckles were swollen, especially those of the left hand; and a blush of redness, such as ordinarily accompanies rheumatic inflammation, appeared over the second joint of her left forefinger.

Further, I noticed some red spots of ecchymosis, with slight articular abrasion, on her right forearm, on its outside, due apparently to a blow or bruise, inflicted, I thought, within twenty-four hours.

Her pulse was, like a rheumatic one, rather full and soft, 120; and at 1 A.M., just after the fatigue of moving, the temperature in the axilla was 102·4°.

Her bowels had been moved before admission. Her abdomen was rather full, but generally tender. Indeed, she shrank from being touched anywhere—was hyperæsthetic. The splenic dulness was increased.

There was no fulness in pelvic region; and she said she had had no previous difficulty in micturition, or noticed anything amiss about her urinary or catamenial functions.

I was told of no vomiting before her admission, and she took all the fluids ordered for her without sickness or repugnance.

Physical examination.—No abnormal breath sounds. Præcordial dulness increased, with loud systolic murmur at apex. There were a few slightly raised vesicular or papular spots on various parts of her trunk and limbs, such as are often seen in

rheumatism, and which, at a later stage, assume the features of miliary rash or sudamina.

At 2 P.M. the same afternoon her temperature, taken in the mouth, was only 99°.

I ordered her milk diet, beef-tea, and arrowroot, with salicylate of soda, 15 grains, every two hours, for four doses; then every four hours.

June 28 (eighth day).—She had passed a very restless, delirious night, trying to get out of bed frequently, and requiring a nurse constantly at her bedside. She complained much of pain across her shoulders and back. The swelling in right parotid region was increased.

Had taken nourishment well. Tongue moist, and not much furred, so far as it could be seen. Bowels had acted twice. Temperature, at 2.30 A.M., 100°; at 12, 99°. Pulse 108. Respiration 44.

Her delirious night decided me to discontinue the salicylate. I stopped all medicine, and bade the nurse keep her mouth moist with drinks.

My house physician thought her less deaf and more rational; but she mumbled and spoke so indistinctly, that I could only guess at the answers she gave, and attached little value to them.

Plenty of water was secreted, but mostly passed under her, and none was saved.

29 (ninth day).—Morning temperature, 99·2°; evening temperature, 101°. Pulse, 128. Respiration, 52. Reported to have slept during some part of the night. She lay flat on her back, not moving, in a curious mental condition, suffering pain apparently only in her jaw, which was extremely tender to the touch. She heard what was said to her, and tried to answer. My house physician says: 'Partly unconscious, but answers rationally sometimes.'

Her bowels had acted once, but the motion was only seen by the nurse. She had passed plenty of urine. None, however, was examined.

The left eyelid was, I thought, a little drooped; but there was no paralysis apparent of arms or legs, and certainly no effusion with or swelling of any of her joints, and the pain seemed to have left her right knee and left hand.

30 (tenth day).—Slept at intervals, and had passed a quiet night, taking her nourishment regularly. Temperature at night was 101°. Pulse, 108; respiration, 63. She told me she felt easier; and, although she articulated very

indistinctly, she certainly understood my question, and put out her tongue as far as she could at my request.

At 3.30, on June 30, she could indeed swallow, but was less conscious. Her breathing became very hurried during the night or towards morning, and her skin cold; and at 7 A.M. she died, this being the tenth day of her illness.

Post mortem, 29 *hours after death.*—Body fairly nourished; skin slightly sallow; muscles for the most part healthy-looking; some parts of left pectoral muscle appeared unusually dark.

Slight bruise or abrasion on back of left hand. No pus formation found in connection with it.

The left ankle-joint and left metatarsal joint, this foot being deformed by talipes, were opened, also left wrist and right elbow joints—all of which had been swollen and tender during life—but they were found perfectly normal.

Head.—Scalp, calvaria, and dura mater normal. Numerous puncta cruenta larger than normal size, and strikingly obvious, were seen upon section of the central hemisphere in the cortical part of the gyrations. Two of some two to three lines in diameter were observed in the left corpus striatum.

In the left central hemisphere and in the left lobe of the cerebellum were two small softenings about the size of split peas, from which broken-down brain-substance, with blood detritus, could be washed out with a gentle stream of water, leaving appearances like small ulcerative excavations.

The arteries at base of brain were normal. No embolisms were detected. Temporal bones and base of skull were examined, but no pus or disease of bone found.

The spinal cord was taken out and carefully sliced; it, with its membranes, appeared quite normal. The enlargement with swelling noticed during life in right parotid region was ascertained to be turgescence and congestion of right parotid gland, but there was no breaking down or pus formation.

The right mandibular articulation was not diseased or implicated; and the pain and difficulty of opening the mouth, noticed above, was caused by this swelling of the right parotid gland. The other salivary glands and cervical lymphatics were natural in size and normal in aspect. Tongue, fauces, and œsophagus normal. Thyroid body normal.

The larynx showed numerous small ecchymoses upon its mucous surface; otherwise normal.

Thorax.—Old adhesions between lung and diaphragm on both sides, and pleuræ adherent to the pericardial sac firmly. No adhesion between pericardium and chest-wall.

Lungs.—Lower lobes of both œdematous. No other abnormality. No hæmorrhagic infarcta.

Pericardium universally adherent to the heart. Adhesions firm, apparently old; over lower part of right auricle the pericardium was calcified in a small space; size, $\frac{1}{4}$ inch in diameter.

All the cavities of the heart were slightly dilated. Very firm pale clots extended through both auriculo-ventricular valves, entangled by chordæ tendineæ, but were not really adherent anywhere to the endocardium. Weight of heart, freed from clot, $13\frac{1}{2}$ ounces.

Right auricle.—Endocardium perfectly smooth, but exhibiting on its surface several white specks. These specks were smooth, circular in form, and surrounded by a narrow dark red ecchymosis-like halo. Eighteen such specks were counted, only three of which failed to present this ecchymosed halo; but this surrounding purpuric extravasation did not in every instance completely surround the white spots. Some were half, others two-thirds only surrounded. Five small ecchymoses without central white spots were noticed. Although most of these purpura spots appeared to cause no protrusion of the endocardium yet the three largest, placed near the edge of the tricuspid orifice, did seem a little raised. Section through them showed that they resided in the endocardium itself, and did not extend into or implicate the muscular structure of the heart. The second largest was situated near the orifice of the coronary sinus. Close examination of the endocardium showedthis thickened and woolly in appearance, and there was a medium degree of granular degeneration in the musculur substance of the right auricle.

Right ventricle.—Cavity dilated, surface of endocardium studded with specks, similar to those already described, but more thickly scattered; thus upon the septum alone, from the edge of the tricuspid valve to the heart's apex, 100 could be easily counted, and the whole endocardium must have contained 250 or more. Several of them were ecchymoses only, without white specks; they varied in size from small to large pinheads.

The tricuspid orifice admitted four fingers. The valve was nowhere thickened or opaque; its chordæ tendineæ showed

no sign of disease, and no specks were situated upon them or upon the curtain of the valve itself.

Pulmonary valves and artery normal. The branches of the latter tracked into the lungs showed no adherent clots.

The muscular substance of right ventricle, under microscope, showed a similar degree of granular degeneration to that of right auricle.

Left auricle, endocardium.—A few specks only visible, but some plumose pencilled opaque lines; and upon the posterior wall of the auricle, about an inch from the rim of the mitral valve, there was a roughened patch of soft lymph, which when scraped away showed the endocardium opaque, rough, and thickened by patches of atheroma.

Left ventricle.—Cavity dilated, walls slightly hypertrophied, mitral orifice easily admitting five finger-tips. The streaky patches previously described were marked on the surface of the posterior curtain of the mitral valve, but the edges of the valve and chordæ appeared normal. The opposite half of the valve was, however, much thickened, and showed a number of minute vegetations along its edges, and much thickening of several of its chordæ tendineæ, and a small patch of atheroma upon its curtain on the under surface, close to where this joined the wall of the ventricle, and below the aortic valves.

The endocardium of the ventricle exhibited several white specks and some purpuric spots, but they were fewer in number than those on the right side of the heart. The largest were situated on the musculi papillares and upon the ventricular septum.

The endocardium was thickened and a little soft; lymph deposited on a patch below and between two of the aortic valves, and one aortic valve was a little distorted by thickening of its edge; the other two were slightly adherent. Some little atheroma round the orifices of the coronary arteries.

The muscular structure, both of left auricle and ventricle, exhibited granular changes.

On stripping off the endocardium and making sections into the muscular substance numerous white specks were found, most abundantly in the ventricular septum.

Minute examination of several of these was instituted by teasing out the muscular substance under the microscope. The intermuscular substance contained fine yellowish and reddish granular matter; and, although no distinct blood corpuscles could be discerned in their central portions, two

or three were seen at the edges of one of them, and the inference drawn was that they consisted of the *débris* of extravasated blood cells.

Bronchial glands normal.

Abdominal viscera.—Left lobe of liver fringed with recent lymph. Similar coating to parts of spleen, causing this to adhere to diaphragm. Liver weighed 66 oz. Small infarcta softening in centre of right lobe, also a few scattered white specks throughout its substance, and mostly near its surface.

Gall-bladder contained normal bile; ducts free; pancreas normal.

Spleen weighed 13 oz., very soft, containing one large pale infarct.

Stomach normal. Intestines presented numerous white specks, exactly like those found in the heart, more in the small than in the large intestines. Near the ilio-cæcal valve was a small puckered old pigmented scar.

Suprarenal capsules normal. Kidneys weighed 18 oz., were large and soft, capsules not adherent. Surfaces studded with numerous specks, mostly surrounded by ecchymosed halos, the cortices of each showing several cone-shaped infarcta of various ages and colours. One or two cysts appeared upon the surfaces of each kidney.

Ureter and bladder normal. The vena cava inferior, iliac and femoral veins were examined, and found free from adherent clots.

The psoas and iliacus muscles and pelvic fascia were dissected, but were entirely healthy, containing no pus collections.

Uterus and ovaries quite normal.

Thus a very patient and minute examination failed to discover any pus focus to which all this multiple infarction could be attributed. The case was not one of pyæmia, but a fairly illustrative one of acute rheumatism with ulcerative or degenerative endocarditis.

XLIX.—*A case of Amputation through the Hip-joint, with Remarks.* By William Stokes, M.D. (Dublin). *Read April* 23, 1880.

THE method of commanding hæmorrhage introduced by Mr. Davy in cases where amputation at the hip-joint has been performed has been attended in the majority of cases with such strikingly satisfactory results that I feel

fairly assured the brief record of a case in which I performed this particular amputation—one which must always rank among the most formidable of operative measures—will not be considered devoid of interest to the members of this Society.

B. Pemberton, æt. 42, a tall, muscular, well-nourished man, by occupation a shoemaker, and who had also for some years discharged the duties of sexton to one of the parochial churches of Dublin, was admitted into the Richmond Surgical Hospital, under my care, on August 29, 1879, suffering from all the signs and symptoms of advanced coxofemoral arthritis. He stated that in the year 1846, when nine years of age, he sustained a fall on the left hip, from the effects of which he suffered for a considerable time, although how long he cannot exactly state. He was in hospital at that time, under the care of the late Dr. Hutton, and was treated by leeches, blisters, and iodine. The following year, the trouble in his hip having increased, he was again admitted into the hospital, and on this occasion put under the influence of mercury. He remained three months in hospital, and then left, having a slight halt, but otherwise apparently quite well. For five years things remained in a quiescent state, during which period he was engaged as assistant to a mason. In 1852 he again sustained an injury to the previously affected joint, from the effects of which he suffered more or less until 1856. Unable then to continue his avocation as a mason, he became apprenticed to a bootmaker, and worked at that trade until the year 1871. Getting tired of so sedentary an occupation, he abandoned it, and became a cabdriver. Towards the end of 1878 he was thrown from his cab, and was brought into hospital suffering greatly from the effects of the fall. He remained in hospital for about seven weeks, and then left, fairly well. In April last, however, he was obliged to take to his bed, which he never left until he came to hospital, on August 29. The condition of the patient on his admission was in truth very deplorable. The very slightest motion gave him the most exquisite pain in the affected hip. The weight of the bed-clothes was almost unendurable; even the vibration of the room from anyone walking hastily across it caused him intense suffering. There was an expression of great distress and anxiety in his face, and his exhaustion from pain and want of sleep, which only the most powerful anodynes, given subcutaneously or by the mouth, could induce, was extreme. His pulse was 120, and his temperature varied

between 99° and 102° F. during the day. The limb was much everted, and there was great apparent shortening. This was, however, mainly apparent, for on measurements being taken it was found to be only three-quarters of an inch shorter than the sound limb. Along the outside of the affected hip there were three sinuses, two of which extended upwards and inwards towards the acetabulum, the third taking a downward direction. On probing the two former denuded softened bone could be distinctly felt, which was not the case on a similar examination being made of the third. Through these there was a copious and almost continuous flow of thin sanious watery purulent discharge. A large bedsore had formed over the sacrum; and being unable by his own efforts to void the contents of his bladder, a catheter had to be introduced night and morning. The bowel evacuations were attended, as might have been expected, with the greatest distress. The patient had no relish or even the slightest desire for food. He had also profuse night-sweats. It is no exaggeration to say that the condition of the patient was in truth pitiable, and it was evident that there was little prospect of his living many weeks, or indeed days, unless relieved promptly by some operative measure.

I considered, naturally, the relative merits of resection and amputation in this case, and decided against the former, in consequence of the great chronicity of the case, the probable, in truth almost certain, existence of osseous disease below where the section should be made in excision, the age and utterly exhausted condition from discharge, and pain of the patient. I accordingly determined in favour of amputation at the hip-joint, and the result has fully justified the course adopted.

Being much impressed by what I had learned of Mr. Davy's method of preventing hæmorrhage in the performance of this particular amputation, and having regard to the exhausted condition of the patient (being fully sensible of the great importance of diminishing as far as possible the shock of the operation), I determined on adopting the method during the operation. On October 1, I performed the operation. The limb was first elevated for some minutes, an Esmarch's bandage applied, then the patient was etherized, and lastly the lever introduced by Dr. Thomson without difficulty. It was at once interesting and pleasing to observe that on the point of the instrument being brought over the common iliac artery the slightest elevation of the handle caused a complete

cessation of the arterial pulsation in the condemned limb. It is not too much to say that the amputation was by this means rendered almost a bloodless one. The operation was done by the formation of an antero-external flap made by transfixion and a postero-internal one made by incision from without inwards. This part of the procedure did not occupy more than a few seconds. The femoral artery was first secured by a carbolized silk ligature, all others by catgut. The strictest antiseptic precautions by Lister's method were observed both during and subsequent to the operation.

Immediately after the operation the temperature of the patient was 98·8° F., pulse 136, and respiration 32. The pulse being very weak, some brandy, with 15 minims of ether, was given, and the pulse became gradually better, though still remaining at 136. Morphia was then given, after which the patient slept for some hours. At 10 P.M. the temperature was 99° F., pulse 130, and respiration 32. The patient did not complain of pain; there was no sign of hæmorrhage or other trouble.

October 2.—Passed a quiet night until 5 A.M., when a severe rigor occurred. A second occurred fifteen minutes subsequently; but these did not recur. 9 A.M.: Temperature 97·6°, pulse 120, respiration 24. Patient complains, but feels otherwise well. 9 P.M.: Patient has slept well for about four hours during the day, and has taken a cup of chicken-jelly, also some milk and lime-water.

3.—Has passed a good night, having slept during the greater part of it. Temperature 99°, pulse 112, respiration 24. The wound was dressed. It looked healthy, and was quite aseptic. The patient during the day took small quantities of beef-tea, chicken-jelly, and iced milk. From this date the progress to recovery was uninterrupted. The wound remained aseptic for eight days, after which a small amount of suppuration occurred. The femoral ligature separated on the thirteenth day. The following note was taken on the twentieth day after the operation: 'Wound dressed to-day. Hardly a trace of suppuration; bedsore healing rapidly; general state of the patient very satisfactory; is free from all pain, his appetite is good, and he sleeps well.' The patient remained in hospital until the middle of December, when he returned home, the wound having completely healed.

It is unnecessary to give the daily record of the progress of this case. It is simply one of uninterrupted recovery. Except when there was some disturbance of the patient by

changing of dressings the pulse and temperature rarely exceeded the normal standard. The patient returned home last November, all discharge from wound and sinuses having ceased. I succeeded in keeping the wound perfectly aseptic for a period of eight days after the operation, and I believe this to have been one reason for the success obtained. Of the many true things Professor Lister has said in reference to the value of his method of dressing wounds none is more true than his statement as to the importance and, in most cases, possibility of keeping wounds close to which have been previously existing sinuses aseptic, if not through the entire period of convalesence, at all events during the most critical time after the operation. This can best be done by diligent spoon-scraping and the free application of chloride of zinc.

The absence of shock after the operation goes far, in my mind, to establish the truth of Von Langenbeck's doctrine as to loss of blood being its main cause after amputation at the hip-joint. By the adoption of Mr. Davy's lever we get rid of what I believe to be one of the greatest dangers in this formidable operation, for I cannot but think that it is the shock induced by hæmorrhage that has hitherto played so influential a part in bringing about the unfavourable results of that operation that until quite recently surgeons have had to record.

It is noteworthy that the two successful results of amputation at the hip-joint operated on in Dublin, and recorded, were those in which the lever and Lister's antiseptic dressings were employed.

L.—*A Case of Secondary Hæmorrhage from a Thigh Stump, with calcareous degeneration of the vessels.* By W. Harrison Cripps. *Read April* 23, 1880.

THE patient, æt. 64, was admitted into the Royal Free Hospital in November 1878, under the care of Mr. W. Harrison Cripps. He was a sallow, emaciated-looking man, having lived on workhouse diet for some years. For ten years he had suffered from a large ulcer just above the ankle. On admission to the hospital the ulcer was 3 inches in diameter, and the seat of a rapidly increasing fungoid growth. This had been six months in progress, and had caused much

pain. The femoral glands were only slightly indurated. The patient's age and his broken-down condition combined to make him an unfavourable subject for interference; but as he was exceedingly anxious that something should be done, the removal of the limb was undertaken. On November 20 the leg was amputated just below the knee, with antero-posterior skin-flaps and a circular cut through the muscles. The femoral artery was compressed with a Sinorini's tourniquet. There was little difficulty in seizing the posterior tibial vessel, for its cut end was seen in the wound, looking like the stem of a clay tobacco-pipe, the walls of the vessel being composed of a rigid mortar-like material. On taking hold of this vessel with forceps the portion grasped immediately broke off. The vessel was seized a second time, more gently, but on the silk ligature being tightened the vessel beneath gave way. On a third attempt being made the artery behaved in a similar manner. The vessel had now so far receded between the bones that a fourth attempt to catch it was impracticable without further cutting. The vessel was left for the moment and attention turned to the anterior tibial, which, however, crumbled to pieces in a similar manner. Acupressure needles were then tried, but, from the position of the arteries between the bones, they could not be used effectually, and the instant the tourniquet was relaxed a jet of blood shot out. Some time having been spent in these futile endeavours to secure the vessels, it was resolved at once to re-amputate above the knee. The femoral, though atheromatous, was not nearly so brittle as the tibials, and was secured by very gently passing a silk thread round its extremity. The flaps were then brought together in the usual way and dressed with carbolic oil. The patient progressed favourably for twenty-eight days. At this date (December 20) he had a rise in temperature, and the stump became somewhat swollen. In the middle of the following night the patient had a severe attack of arterial hæmorrhage, the blood coming from a sinus in the inferior angle of the flap. On seeing the patient an hour after the bleeding, the stump was found greatly swollen, with three coils of india-rubber tourniquet bound tightly round the limb, just below Poupart's ligament. On loosening the band arterial blood again flowed from the sinus. Under chloroform the femoral artery was cut down upon and tied in continuity $3\frac{1}{2}$ inches above the flap, thick carbolized catgut being used. The patient progressed favourably for four weeks, but appeared weak from

the loss of blood. In the middle of the fifth week he had another sharp attack of hæmorrhage from the seat of the second ligature. A pencil, thickly wrapped round with lint, was laid along the course of the artery. The stump was then fixed with a gutta-percha shield extending from the buttock to beyond the stump, the width of the shield being two-thirds the circumference of the limb. An elastic bandage was then wound round the limb, splint, and pencil, so as to exercise gentle pressure from the extremity of the stump upwards. The elastic pressure was continued for a week. No more hæmorrhage occurred, but the patient seemed never able to rally from the loss of blood, and died quietly, from exhaustion, three weeks after the last attack of bleeding.

The post-mortem examination showed calcareous and diseased vessels in most of the vascular system. The last two inches of the femoral artery seemed obliterated, and a firm adherent clot occupied the remainder of the vessel as high as the origin of the profunda.

Remarks.—In this case there would appear to be two points of especial interest: firstly, the course to be adopted when degenerated vessels will not hold a ligature between the bones; secondly, the best treatment for secondary hæmorrhage from the stump. Now, in dealing with the first question it must be at once admitted that if the vessels are suspected to be diseased, amputation of the limb should be avoided if possible; but yet, with ordinary precaution, surgeons will now and again find themselves in difficulties in securing diseased vessels between the bones. In such circumstances three lines of treatment are possible:—

1. Pressure along the course of the main vessel.
2. Ligature of the main vessel in the thigh.
3. The proceeding adopted in the case narrated—of at once amputating higher up.

It is probable that few surgeons would feel satisfied to leave such vessels as the tibials entirely open in the stump, trusting to pressure alone to restrain the bleeding. Such pressure would so interfere with the blood-supply of the flaps that their union would be greatly delayed if not altogether prevented. Now, in choosing between the two remaining alternatives, amputation above the knee was selected, rather than ligature of the femoral artery in continuity, on the following grounds:—

Firstly, that if the vessel would not hold a ligature acu-

pressure could be resorted to, which would be a matter of difficulty in a vessel exposed in continuity.

Secondly, that secondary hæmorrhage was less likely to follow the amputation than ligature of the femoral. Secondary hæmorrhage from an artery tied in continuity is at least as likely to occur from the distal as it is from the proximal end of the vessel, and it thus seemed that, by amputation, the risk of bleeding was halved, by removing the chance of a regurgitant stream.

In any case the patient's condition was one of great risk, and, after all, it became a matter of choice between the least of two evils.

The best method of treating the secondary hæmorrhage that occurred from the thigh stump is also a matter upon which some doubt must exist. There appear to be four possible plans for dealing with such an accident:—

1. Reopening the flaps.
2. Ligature of the main vessel in continuity.
3. Amputation higher up.
4. Pressure.

The length of time after the amputation, and the apparently firm union of the flaps, appeared to render a search for the vessel at the bleeding-point a hazardous operation, with no certainty of success. In choosing between a second amputation and a ligature of the artery in continuity it appeared that the reduced condition of the patient from the bleeding was such that a second amputation through the middle of the thigh was not unlikely to be followed by a speedily fatal result. The ligature of the artery in continuity immediately above the flaps was a comparatively small operation, while the short length of vessel beyond the ligature could not have increased the probability of secondary hæmorrhage as a regurgitant stream. Lastly, in pressure we probably have one of the most efficient, though least frequently tried, methods of dealing with secondary hæmorrhage. This, to be effectual, requires to be carefully graduated, so as to be sufficiently firm to fulfil its purpose, but not enough to cause undue strangulation of the part. When applied to the thigh stump a well-moulded external splint, extending from the buttock downwards, keeps the part steady, and greatly facilitates the regulation of the amount of pressure.

It is possibly to be regretted that in the case narrated, instead of the second ligature of the artery, well-adjusted

pressure was not tried, for this method proved effectual when the hæmorrhage occurred under even more desperate circumstances; and the post-mortem examination disclosed an effectual clot, which would doubtless have prevented a return of the bleeding.

LI.—*On Section of the Femur above the Small Trochanter for Angular Ankylosis of the Hip.* By Richard Barwell. *Read May* 14, 1880.

WILLIAM D., æt. 12, came to me for admission into an institution for crippled boys at the end of October 1879. When he was five years old he had a fall, and was confined to bed with hip disease for nearly a year. In three years after the accident he began to get about on crutches. Further history is unattainable. I found bony ankylosis of the hip, the thigh at a right, or perhaps rather less than a right angle with the pelvis; it was also somewhat adducted. There were two scars of healed sinuses above the trochanter, and four on the outer aspect of the thigh, a little below that process. The boy had evidently had extensive suppuration about the hip; the condition of parts showed that considerable changes in the shape, length, and direction of the cervix femoris had taken place. The lameness was excessive; even when he walked on crutches the lumbar lordosis was strongly marked. If he tried to put the foot to the ground he could only succeed by bending the other knee, giving a singular twist to the pelvis, and such a curve to the spine as made the posture approach the impossible. I sent the lad to the Hospital, feeling sure that the deformity and lameness might be greatly mitigated.

On October 30 I operated antiseptically thus: from near the top of the great trochanter on the outside of the limb an incision about $1\frac{1}{2}$ inches long was made along the bone, and extending through the periosteum; across the centre of this another cut equally deep and slightly exceeding at either end the breadth of the bone was made. With the elevator the periosteum was peeled away round both the back and front of the bone to its inner side. The ilio-psoas tendon, losing itself on the lesser trochanter, and above and outside this a space bounded above and to the outer side by the curved neck of the femur could now easily be felt.

Through this space, by means of a proper holder, I passed an ordinary semicircular suture-needle armed with stout silk, with which I drew round the bone a chain-saw and divided it obliquely upwards and outwards. The leg was then brought down straight, he was put to bed, and a weight was attached to the foot. The boy never had a bad symptom, and but a very slight amount of pain. His temperature chart for a week after operation ran thus:—

	Morning.	Evening.
Oct. 30	—	98°
„ 31	99·4°	101·2°
Nov. 1	98·6°	100·6°
„ 2	99·4°	101°
„ 3	99·2°	100·8°
„ 4	98·4°	100°
„ 5	98·4°	98·4°

The rest normal.

On December 3 he was allowed to get up and go about on crutches until a proper boot was provided. There is, as was expected, and indeed intended, firm bony union at the place of section.

Remarks.—The thigh has been divided at the upper part in various places since 1826, when Rhœa Barton first introduced the treatment for angular ankylosis (true). In 1862 Dr. Lewis Sayre performed the operation twice. In 1870 Mr. William Adams divided the neck of the thigh-bone. At the end of 1872 Mr. Gant sawed through the femur below the trochanters. I am not aware that sawing through the bone above the lesser trochanter has ever been previously performed in England; therefore my reasons for rejecting in this case the two English procedures should be stated. Mr. Adams' operation (that of 1870) is well-devised, and holds good in any case to which it is adapted; but such cases can form but a minority of the ankylosed hips in a bad position. Such condition is most commonly produced by strumous hip disease, the morbus coxæ of children, which generally also causes such absorption and such modification about the neck of the femur that Adams' operation has no *locus standi*. There is sometimes nothing to divide; or, if there be anything, its position and shape are indeterminate. It was, I believe, in order to fill this large gap that Mr. Gant proposed section of the femur below the trochanters with a straight saw introduced at the outer surface of the bone, and carried

through it inward. Mr. Gant operated on two cases. Of one he lost sight, and the result, save that the lad remained alive, is unknown. In the other case the report speaks of an angle to be felt but not seen at the junction of the section-ends of the bone—perfectly straight limb; 'boy can stand and walk without any limp.' This last phrase is to me rather surprising, because there must have been shortening, and there must have been complete stiffness of the thigh at the hip. I regret (for the operation does not commend itself to my mind) that I have not been able to see this case. From *à priori* reasons alone, therefore, can I judge of its results; thus if the thigh be united at a right angle to the pelvis the amount of shortening must be equal to the distance from the axis of movement at the hip-joint to the lower part of the lesser trochanter, as is evidenced by the projecting angle above-mentioned—a distance which in adult femora is $2\frac{1}{2}$ inches to $3\frac{1}{2}$ inches.

The operation which I chose is a considerable modification of Lewis Sayre's, whose method is founded upon Rhœa Barton's. Both these surgeons aimed at producing some form of joint at the place of section. The older operator succeeded only for a time; the limb soon became stiff. The more recent surgeon had two cases. In the second (a young woman), after death, which occurred before the protracted suppuration ceased, Nature had apparently made some effort to form a new joint. In the first it is scarcely doubtful that no movement at the place of section remained. The result was excellent—as good, I hold, as can be produced by the operation; for I consider that both these surgeons aimed at the unattainable. It is, I firmly believe, impossible to produce at this part of the body an artificial joint, which shall allow of normal movements only, and at the same time support the weight of the trunk; I therefore rejected altogether any such attempt; hence cut out no wedge-shaped or lunated piece of bone, a procedure which must greatly increase the dangers of suppuration. The section was made obliquely, beginning just above the small and terminating a little below the middle of the square face on the outer aspect of the great trochanter. I took care to preserve the periosteum, but was a little surprised to find how readily it could be peeled away from the bone. Scarcely so much as twenty drops of blood were lost during the operation. One difficulty I met with which arose from the way suture-needles are tempered, viz. only hardened

near the point: I found some difficulty in getting the silk round the bone. To obviate this for the future I have had an instrument made which I now show; it consists of a German silver tube, carrying a watch-spring, something like a Bellocq's sound; but the spring is sharp, can be pulled entirely through the canula, and has near its further end an eye for the armature. In its use—and I have employed it on more than one subject—the surgeon may pass it either from before or behind, but the former is best; he should, after peeling away the periosteum, as described, pass one forefinger behind the bone till he feels the small trochanter and the ilio-psoas tendon; then with the other hand he passes the instrument, with the spring-point retracted, till he feels its end impinge against his finger above that tendon; the spring is then extruded, drawn entirely out of the canula and out of the wound also, bringing with it the silk, which in its turn carries the chain-saw. Thus performed the operation is very easy. The result is this (boy exhibited), a perfectly straight limb, *i.e.* a limb which in standing is perpendicular, without abnormal bend at the loins. It is barely an inch short, and even that amount of shortening is produced by want of growth of the femur, the consequence of hip disease. The boy walks exceedingly well, with very little limp, and with no sway or swing of the trunk. I would call attention to the fact that, the operation being subperiosteal, such rapid union of the bone took place that the patient was confined to bed only thirty-three days.

Three weeks ago I repeated this operation on a young woman, whose limb is now quite straight, and who will doubtless soon be allowed to get about.

LII. — *Cases of Rheumatic Fever treated with Salicin.* By Edward Headlam Greenhow, M.D. *Read May 14, 1880.*

ALTHOUGH rheumatic fever rarely proves immediately fatal it is attended by so much suffering, and so frequently causes disease of the heart, leading to death at a more or less remote period, that its treatment must always be a subject of much interest and anxiety to the physician. Hitherto, whilst many and very diverse modes of treatment, founded on different views of the nature of the disease, have

been proposed, none of them has gained general acceptance with the profession.

I have been in the habit, for some years, of trying carefully and methodically, in a series of cases, the several remedies which have been from time to time proposed, on what appeared to me good authority, for the treatment of rheumatic fever. The last of these remedies I have thus tried were salicin and salicylate of soda; and notwithstanding that a very admirable paper upon the treatment of rheumatic fever with these medicines was communicated to the Society by Dr. Hermann Weber in 1877, and published in the tenth volume of our 'Transactions,' I propose to lay the results of my experience in the use of these remedies before the Society this evening.

I have had under my care in the wards of the Middlesex Hospital, during the last three years, ten cases of rheumatic fever treated with salicin, and fifty treated with salicylate of soda; and my sole purpose on the present occasion being to estimate, as far as possible, from this experience the true value of these agents in the treatment of this disease, I shall only give such a brief abstract of each case as may be useful for that purpose. In order to avoid repetition I may say that all the patients were confined to bed until the fever had entirely subsided, and were preserved by suitable clothing and bed-curtains from exposure to cold or to draughts of air. The diet during the febrile stage of the illness consisted invariably of the milk diet of the hospital, with beef-tea, and sometimes eggs. Stimulants were only administered when either the patient's condition or previous habits seemed to render them necessary, and always as sparingly as possible. The swollen and painful joints were carefully wrapped up in cotton-wool; and where either pericarditis or endocarditis existed an ointment, consisting of equal parts of extract of belladonna and ointment of iodide of potassium, was applied over the præcordia, with a thick layer of cotton-wool over all. In most cases simple effervescing medicine was prescribed on the day of admission, and aperients and occasionally sedatives were given when required; but, in order to leave full play for the action of the remedy under trial, the latter were employed as seldom as possible. Sometimes they were ordered on the first night after the patient's admission, but were rarely repeated after the salicin or salicylate of soda was prescribed. In all the cases treated with salicin, and in many of those treated with salicylate of soda, the urine was

examined the day after beginning the medicine, and found invariably to yield the characteristic reaction with solution of perchloride of iron.

Many cases of rheumatic fever, especially in young subjects—presenting severe pains in the joints, a moderately high temperature, and even some degree of cardiac complication—improve rapidly after admission into hospital, and become almost convalescent in the course of three or four days, without any treatment beyond the free use of diluents, occasional sedatives and aperients, good nursing, rest in bed, and carefully regulated diet and clothing. Being anxious to exclude a class of cases which might be a source of fallacy in estimating the value of a new remedy, I laid down the rule that no patient should be put on the treatment with salicin or salicylate of soda until he had been from twenty-four to thirty-six hours in the wards, and only then if it seemed clear that the illness was running an acute course. Notwithstanding this rule a few patients, some of whom appear to have been suffering only from this mild and manageable form of rheumatism, were placed under the special treatment at an earlier period; and considering it incumbent upon me to place the whole of my experience before the Society, I have deemed it right to include them in my report.

The progress of each patient was carefully noted from day to day, and the temperature was taken at stated intervals, in many cases as often as every two, three, or four hours; but I have not thought it necessary to quote all these observations, and shall only mention those which appear to bear upon the effects of the medicine.

Reserving my experience on the use of salicylate of soda for a separate communication, I shall now confine myself to the consideration of the ten cases treated with salicin.

Case I.

T. L., æt. 25, policeman, admitted on February 10, 1877. Previous health good. Five days before admission began to feel pain and stiffness in his lower limbs, which he attributed to exposure whilst on night duty. The pains extended to the upper limbs, and the day before he had felt pain in the chest on deep breathing.

State on admission.—Pulse 125; temperature 102°. Left wrist swollen, red, painful, and very tender; small joints of left hand also painful; pain and tenderness of both knees and right ankle; marked cantering rhythm of heart.

February 11.—9 A.M Pulse 104; temperature 100·6°. Pains continue; profuse sour sweating.

Take 20 grains of salicin every two hours.

9 P.M.—Pulse 100; temperature 101°.

12.—9 A.M. Pulse 104; temperature 99·4°. Slept badly. Pain in left wrist decreased; right wrist swollen, very painful, and tender. Tongue furred, brown in centre; a soft pericardial rub just within left nipple. Has had very free epistaxis.

9 P.M.—Temperature 102·1°.

13.—9 A.M. Pulse 105; temperature 102°. Is much easier; sour sweating continues.

9 P.M.—Pulse 92; temperature 99.4°. Has had several returns of epistaxis during the day.

14.—9 A.M. Pulse 80; temperature 100·4°. Slight pain of right wrist excepted, is quite free from pain. Faint systolic murmur at apex of heart.

9 P.M.—Pulse 92; temperature 99·6°.

15.—9 A.M. Pulse 84; temperature 99·4°. Slight epistaxis last evening.

9 P.M.—Pulse 88; temperature 99·4°.

16.—9 A.M. Pulse 68; temperature 100°. No pain; heart sounds faint, impulse feeble.

9 P.M.—Pulse 72; temperature 100·4°.

Two drachms of brandy to be given every three hours.

17.—9 A.M. Pulse 68; temperature 98·6°. Pulse weak; no pain or sweating.

Take salicin only every four hours.

9. P.M.—Pulse 76; temperature 98·6°.

The pulse and temperature now kept normal for some days. On February 19, being the eighth day from the commencement of the salicin, it was reduced to a dose every six hours. On the 21st there was slight return of pain in the left elbow and right wrist, and the patient complained of feeling very weak. Was ordered half an ounce of brandy every four hours.

26.—9 A.M. Pulse 66; temperature 99·2°. Pains in both knees, elbows, and arms; faint systolic murmur over præcordia, loudest at base of heart.

9 P.M.—Pulse 88; temperature 99·4°.

27.—9 A.M. Pulse 72; temperature 100·8°. Pains continue; slept badly.

28.—9 A.M. Pulse 104; temperature 100·6°. Was kept

awake by pains in the joints; considerable tenderness of right elbow and both wrists; sweating freely.

Take 20 grains of salicin every two hours.

9 P.M.—Pulse 88; temperature 100·6°.

March 1.—9 A.M. Pulse 84; temperature 99·8°. Joints easier; sweating continues.

9 P.M.—Pulse 76; temperature 100·4°.

2.—9 A.M. Pulse 68; temperature 99·4°.

9 P.M.—Pulse 84; temperature 99°.

3.—9 A.M. Pulse 72; temperature 99·2°. Has again had several slight attacks of epistaxis.

Take salicin every four hours.

The pains now decreased. The temperature and pulse became normal, and the salicin was decreased to a dose every six hours on March 6, and discontinued on March 10. There still, however, remained some pain and stiffness of joints and sweating. On March 20, 5-grain doses of iodide of potassium were ordered to be taken every six hours in effervescing medicine. The patient was discharged convalescent on April 17.

Case II.

G. W., æt. 30, clerk, admitted January 22, 1877. A brother suffers from rheumatism, and patient himself has already had five attacks of rheumatic fever; has been a free drinker. Present illness commenced about fourteen days ago with pains in the joints and headache.

State on admission.—Pulse 114; temperature 100·4°. Both wrists swollen, red, hot, and tender; shoulders, knees, and right elbow painful and tender. Sour sweating. Blowing systolic murmur at heart; first sound sometimes reduplicate; urine, sp. gr. 1028, normal.

9 P.M.—Pulse 112; temperature 101·2°.

January 23.—9 A.M. Pulse 120; temperature 100·6°. Pains continue very severe; sweating profusely. Cantering rhythm of heart.

Take 20 grains of salicin every two hours.

9 P.M.—Pulse 112; temperature 99·6°. Pains less severe.

24.—9 A.M. Pulse 100; temperature 100·6°. Slept well; sour sweating; slight pain and tenderness of left shoulder, wrist, and small joints of right hand; considerable pain and tenderness of left temporo-maxillary articulation.

9 P.M.—Pulse 112; temperature 100·4°. Complains of pain in the left infra-mammary region; pleuritic friction at seat of pain.

25.—9 A.M. Pulse 100; temperature 99·6°. Pains generally better; pain in left side entirely relieved by a mustard and linseed poultice applied last night.

9 P.M.—Pulse 100; temperature 100·5°.

26.—9 A.M. Pulse 90; temperature 99°. Slept well; pains much easier; friction on left side no longer audible.

9 P.M.—Pulse 95; temperature 99°.

27.—9 A.M. Pulse 90; temperature 99°. Urine, sp. gr. 1030, normal; pain and tenderness of both shoulders and of left hand.

9 P.M.—Pulse 95; temperature 98·7°.

The temperature now kept normal for several days. On January 29 the salicin was reduced to a dose every four hours. On the 30th there was some return of pains in various joints. On February 1 the sweating still continued, and the patient complained of nausea, and was sick. The heart sounds on this day were clean. On February 3 there were severe pains in the joints; and at 9 A.M. of February 4 the temperature ran up to 100·6°, and the pulse to 104.

The salicin was now again increased to 20 grains every two hours.

The temperature and pulse soon fell to the normal standard, but the sour sweating and more or less pain continued; and on February 7 pericardial friction, attended by slight rise of temperature, was noted; the nausea and sickness still continued, and the patient complained of headache. On February 9 the salicin was directed to be given only every four hours; and two days later, the headache and sickness continuing, it was omitted. Next day 5 grains of iodide of potassium were prescribed every six hours; and two days later 2 grains of quinine, with 3 of extract of henbane, were ordered to be taken also every six hours. The temperature now remained normal, but the pains subsided very slowly. The patient was discharged convalescent on May 9.

Case III.

M. E., æt. 19, needlewoman, admitted December 9, 1876. An only sister suffers from rheumatism. Previous health good. Present illness commenced, after getting wet through six weeks ago, with neuralgia of the face, followed a few days later by pains in the elbows and other joints.

State on admission.—Pulse 132; temperature 100·6°. Both wrists and hands swollen, hot, slightly red, and painful; left knee and right elbow are likewise painful; peri-

cardial friction is heard just inside the left nipple; urine, sp. gr. 1020, neutral.

Take 20 grains of salicin every two hours.

9.30 P.M.—Pulse 120; temperature 102·8°. Face flushed; profuse sour sweating.

December 10.—9 A.M. Pulse 116; temperature 101°. Slept badly; no pain in right wrist.

9 P.M.—Pulse 116; temperature 101·8°. Much less pain; still sweating.

11.—9 A.M. Pulse 116; temperature 100·2°. Urine, sp. gr. 1035, acid; no pain or sweating; first cardiac sound rough inside nipple.

9 P.M.—Pulse 92; temperature 100·6°.

12.—9 A.M. Pulse 84; temperature 99·6°.

9 P.M.—Pulse 92; temperature 99·4°.

13.—9 A.M. Pulse 72; temperature 98°.

The temperature did not again exceed 99°, and the pulse kept normal. On December 15, the first sound of the heart being very faint, 2 drachms of brandy were ordered to be given every three hours, and next day the salicin was reduced to a dose three times a day. On December 17, the first sound of the heart continuing faint, the salicin was omitted. A few days later the heart had resumed its normal force, but a distinct systolic murmur at the apex became developed, and was still present when the patient was discharged convalescent on January 3.

Case IV.

G. H., æt. 32, porter, admitted on January 9, 1877. Mother subject to rheumatism. Patient has already had two attacks of rheumatic fever. Drinks spirits freely. Present illness commenced after having been exposed to wet sixteen days since. He first experienced pain in the hips and knees, and shortly afterwards in the other joints. Has a slight cough, and has sweated very copiously.

State on admission.—Pulse 84; temperature 98·6°. Urine, sp. gr. 1032, acid; left knee slightly swollen, hot and tender; heart's apex beating in sixth interspace two inches below nipple; impulse forcible and diffused; first sound at apex rough, long, and booming; a faint systolic murmur at base.

January 10.—9 A.M. Pulse 84; temperature 99·2°. Profuse sour sweating; pain and tenderness in shoulders, elbows, and both wrists.

9 P.M.—Pulse 92; temperature 102°.

11.—9 A.M. Pulse 102; temperature 100·3°.

Take 20 grains of salicin every two hours.

9 P.M.—Pulse 96; temperature 102·6°.

12.—9 A.M. Pulse 84; temperature 99·5°. Slight pain only in right shoulder and hand.

9 P.M.—Pulse 85; temperature 100°.

13.—9 A.M. Pulse 80; temperature 99°. Complains of pain in the præcordia; faint to-and-fro sound just above the apex of heart.

9 P.M.—Pulse 84; temperature 98·6°.

The temperature was now normal or subnormal for several days, but the sweating and some stiffness of joints remained. The salicin was reduced to a dose every four hours on January 15, and entirely discontinued on the 25th. Next day the patient complained of pain in the knuckles of the right hand, and the sour sweating still continued; the temperature also rose to just under 100°. On January 30 the temperature rose to 101·4°, and there was pain in both shoulders and right elbow. With this accession of fever the urine acquired a sp. gr. of 1035. Effervescing draughts, with 5 grains of iodide of potassium, were now ordered every six hours. The pains and sweating gradually subsided, and the patient was discharged convalescent on March 8.

Case V.

J. B., æt. 24, gilder, admitted March 3, 1877. One brother has had rheumatic fever, and patient himself has already had two previous attacks of the same disease. About a month since, after exposure to cold, he experienced pains in various joints, and was confined to bed for a fortnight. He subsequently returned to work, but in a few days the pains returned in the knees and ankles, and have been progressively getting worse.

State on admission.—Pulse 100; temperature 102·4°. Sweating very freely; both ankles and left knee swollen and very tender; right shoulder and both hips painful; heart sounds clean; urine, sp. gr. 1025, neutral.

March 4.—9 A.M. Pulse 92; temperature 101°. Slept badly.

9 P.M.—Pulse 108; temperature 102·6°. Sweating profusely.

5.—9 A.M. Pulse 96; temperature 102·1°. Pains continue; much sour sweating; pericardial friction; urine, sp. gr. 1032.

Take salicin, 20 grains, every two hours.

9 P.M.—Pulse 96; temperature 102·6°.

6.—9 A.M. Pulse 92; temperature 101·8°. Did not sleep well; right wrist very much swollen and painful; other joints easier; soft systolic murmur at apex of heart.

9 P.M.—Pulse 88; temperature 101°. Is bathed in sour perspiration.

7.—9 A.M. Pulse 72; temperature 98·8°. Slept all night; pain only in right hand; epistaxis last evening; pulse small and feeble.

Take 2 drachms of brandy every three hours.

9 P.M.—Pulse 80; temperature 100·5°.

The temperature now fell to the normal standard, and the pulse ranged from 52 to 70. The sweating became less copious, but wandering pains and stiffness of joints continued for several days. On March 9 the salicin was reduced to a dose every four hours; on March 12 to a dose every six hours; and was entirely discontinued on March 15.

Discharged convalescent on March 23.

Case VI.

E. L., æt. 21, servant, admitted March 12, 1877. No history of rheumatism either in patient herself or her family. Has been ailing for ten days, and has for three days been suffering from pains and swelling in her ankles, and pain in hips and left shoulder.

State on admission.—Pulse 112; temperature 103·4°. Redness, heat, swelling, and tenderness of both ankles and knees; pain of hips. Heart sounds normal. Urine, sp. gr. 1028, alkaline.

March 13.—9 A.M. Pulse 112; temperature 103°. Slept badly.

9 P.M.—Pulse 100; temperature 103·1°.

14.—9 A.M. Pulse 100; temperature 103·2°. Sweating freely; right knee very painful.

9 P.M.—Pulse 96; temperature 101·2°.

15.—9 A.M. Pulse 100; temperature 103°. Pains and sweating continue.

Take 20 grains of salicin every two hours.

9 P.M.—Pulse 90; temperature 101·8°.

16.—9 A.M. Pulse 105; temperature 102·1°. Right knee still swollen and very painful; complains of pains across the shoulders.

9 P.M.—Pulse 84; temperature 101·8°.

17.—9 A.M. Pulse 84; temperature 101·1°. Pain in right elbow only; much sweating last night.

9 P.M.—Pulse 68; temperature 100°.

18.—9 A.M. Pulse 60; temperature 99°. Quite free from pain; sweating.

9 P.M.—Pulse 60; temperature 98·2°.

The temperature did not again exceed 99°, and was commonly rather subnormal; and the pulse ranged from 52 to 64 until after March 27. On March 20 a faint pericardial rub was audible inside the left nipple, and the patient complained of pain in the epigastrium. The salicin was reduced to a dose every four hours, and on the 24th to a dose every six hours. The pulse now became feeble, and there was sickness and pain in the epigastrium. Brandy and soda-water were prescribed; but the sickness continuing, the salicin was discontinued on the 26th. The vomiting then ceased. On March 28 and 29 there was return of pain in the right hand, and the temperature rose to 99·3°; and on the 31st to 101·8°, when there was pain in both knees and feet. The salicin was, however, not resumed; but the fever and pain subsided in a few days, and the patient was discharged on April 27.

Case VII.

G. B., æt. 38, porter, admitted March 16, 1877. Previous health good, but the patient was a member of a rheumatic family, his mother and several other relatives having suffered from rheumatic fever. Two days before presenting himself at the hospital he awoke, early in the morning, with pain in the left instep. In the course of the same day the left hip became painful, and the left wrist swollen and tender. In the evening the right knee and ankle became similarly affected, and he had some shivering.

State on admission.—Pulse 90; temperature 102·3°. Is sweating very freely; both knees and ankles and left wrist swollen, red, and very tender; heart sounds clean.

March 17.—9 A.M. Pulse 80; temperature 101·2°. Slept badly; pains rather less severe; urine, sp. gr. 1031, acid.

9 P.M.—Pulse 76; temperature 100·6°. Sweating freely.

18.—9 A.M. Pulse 80; temperature 99·8°. Pulse small; pains continue severe; did not sleep well.

Take 20 grains of salicin every two hours.

9 P.M.—Pulse 80; temperature 100·6°. Sour sweating.

19.—9 A.M. Pulse 76; temperature 99·6°. Slept well; still much tenderness of knees, ankles, and left hand.

9 P.M.—Pulse 80; temperature 102·6°. Very copious sweating.

20.—9 A.M. Pulse 68; temperature 98·9°. Pulse weak; pains much easier, but swelling and tenderness of knees and ankles continue; slept well; sweating freely.

9 P.M.—Pulse 76; temperature 100°.

21.—9 A.M. Pulse 72; temperature 99·4. Bathed in sour perspiration.

From March 21 to 31 the temperature ranged from 97·8° to 99·7°, but was usually normal. The pulse varied from 68 to 88. The pains and swelling of joints and the sour sweating gradually subsided, but did not disappear before the middle of April. The salicin was reduced to a dose every four hours on March 28, and entirely discontinued on April 9. Discharged convalescent on April 30.

Case VIII.

E. L., æt. 29, married woman, admitted January 4, 1877. A history of rheumatism in mother. Patient herself had rheumatic fever at the age of 19, but has in other respects enjoyed unimpaired health. The present illness commenced with shivering and aching in the limbs ten days ago. Severe pains in the knees and wrists followed, and she became unable to move about. Is nursing an infant twelve months old.

State on admission.—Pulse 100; temperature 101·8°. Heart sounds clean; complains of pains in the knees and wrists, but these joints are neither swollen nor tender.

9 P.M.—Pulse 86; temperature 101°.

January 5.—9 A.M. Pulse 80; temperature 101·7°. Left wrist and right elbow swollen, red, and very tender; urine, sp. gr. 1025, acid.

Take 20 grains of salicin every two hours.

9 P.M.—Pulse 72; temperature 99·4°.

6.—9 A.M. Pulse 72; temperature 99·8°. Pains somewhat easier; sweating freely.

9 P.M.—Pulse 72; temperature 98·8°.

From this date the temperature was always normal or subnormal, and the pulse quiet. The pains soon subsided, but the sweating continued for some days. On January 9, the pulse being very feeble, the salicin was reduced to a dose every four hours. On the 14th it was again reduced to three doses daily, and was entirely omitted on January 17. The patient was discharged convalescent on January 27.

Case IX.

A. J. M., æt. 35, tailor, admitted February 3, 1877. Both father and grandfather suffered from rheumatism. Patient himself had rheumatic fever four years ago, and has occasionally had rheumatic pains since that time. Present illness began, two days before admission, with sharp pain in the back, followed by pains in most of the joints.

State on admission.—Pulse 96; temperature 101°. Both ankles and hands swollen, red, and painful; heart sounds clean; impaired percussion resonance and scanty crepitation in posterior base of right lung; sour sweating.

9 P.M.—Pulse 110; temperature 102·8°.

February 4.—9 P.M. Pulse 100; temperature 100·4°. Slept well; no material change.

9 P. M.—Pulse 100; temperature 102·6°.

5.—9 A.M. Pulse 84; temperature 101·2. Urine, sp. gr. 1028, acid; sweating freely. No change either in lungs or joints.

Take 20 grains of salicin every two hours.

9 P.M.—Pulse 92; temperature 101·8°. Sour sweating continues.

6.—9 A.M. Pulse 92; temperature 101·9. Sweating; has slight occasional cough; scanty crepitation in base of left as well as right lung.

9 P.M.—Pulse 112; temperature 103·2°.

7.—9 A.M. Pulse 100; temperature 101·8°. Has severe pain in left hand; other joints easier; left hand and wrist swollen, red, and tender; sweating profusely; no change in state of right lung.

9 P.M.—Pulse 92; temperature 102·8°.

8.—9 A.M. Pulse 96; temperature 101·8°. Slept well; very copious sour sweating; right front of chest expands imperfectly; impaired resonance over right back of chest from apex to base; crepitation and increased vocal vibration over dull area.

9 P.M.—Pulse 92; temperature 103°.

9.—9 A.M. Pulse 84; temperature 102·4°.

9 P.M.—Pulse 85; temperature 102·6°.

10.—9 A.M. Pulse 92; temperature 101·6°. Complains of pain in left arm; condition of right lung much improved.

9 P.M.—Pulse 85; temperature 102°.

11.—9 A M. Pulse 76; temperature 100·6°. Pains much better.

9 P.M.—Pulse 88; temperature 101·4°.

12.—9 A.M. Pulse 84; temperature 100·2°. Pain in the right hand and in both shoulders; urine, sp. gr. 1015, normal.

9 P.M.—Pulse 84; temperature 101°.

13.—9 A.M. Pulse 78; temperature 100·5°. Sweats a good deal; lungs almost normal.

9 P.M.—Pulse 84; temperature 99·4°.

14.—9 A.M. Pulse 96; temperature 99°. Pulse very feeble; still much sour sweating; pain in right shoulder and wrist; no swelling or tenderness.

Take salicin only every four hours.

9 P.M.—Pulse 72; temperature 99°.

17.—Pulse 76; temperature 99°. Pulse very weak and compressible; sounds and impulse of heart feeble; still sour sweating.

Take salicin every six hours.

The patient continued to improve slowly; the salicin was omitted on February 19, and the patient was discharged convalescent on March 8.

Case X.

D. A., æt. 20, porter, admitted January 9, 1877. Father rheumatic; patient had rheumatic fever three years since. Six days ago felt slight pain in the knees, and afterwards in the ankles, shoulders, and hands. Urine during the last few days has been of a deep blood-red colour.

State on admission.—Pulse 108; temperature 102°. Both feet swollen, red, hot, and tender; knees swollen, hot, and painful; sour sweating; breath sounds normal; a soft systolic murmur audible over the præcordia; urine, sp. gr. 1030, copiously albuminous.

9 P.M.—Pulse 128; temperature 102·8°; respirations 32. Has a harsh, dry cough; very profuse sweating.

January 19.—9 A.M. Pulse 102; temperature 103·6°. Troublesome cough, attended by copious frothy sputum; resonance slightly impaired over both posterior bases; breath sounds feeble, and accompanied by faint crackling in base of left lung; breathing laboured. Pains in joints, as yesterday. Urine, sp. gr. 1030, very acid, albumen; no blood or casts.

Take 20 grains of salicin every two hours.

9 P.M.—Pulse 128; temperature 103·2°; respirations, 60.

12.—9 A.M.—Pulse 120; temperature 103·2°. Pulse irregular both in rhythm and force; impaired resonance over

posterior bases of both lungs, and also over lower half of left front of chest; breath sounds harsh in bases, no adventitious sounds; loud pericardial friction over præcordia; heart's impulse feeble.

Take half an ounce of brandy every four hours. Continue salicin.

9 P.M.—Pulse 120; temperature 102·4°. No rheumatic pains; complains of pain in præcordia; has vomited after salicin.

12.—9 A.M. Pulse 120; temperature 102·6°. Slept badly. Continue salicin.

9 P.M.—Pulse 130; temperature 103°.

13.—9 A.M. Pulse 120; temperature 101·2°. Urine, sp. gr. 1026, very acid, quantity of albumen greatly decreased. Impaired resonance over bases of lungs; breath sounds harsh and tubular in bases of both lungs.

9 P.M.—Pulse 116; temperature 102°.

14.— 9 A.M. Pulse 116; temperature 102°. Right knee very painful. Dulness on percussion over lower half of sternum from its right margin into left axilla; loud pleuritic friction in right mammary region. Sputum blood-stained.

9 P.M.—Pulse 120; temperature 102·3°.

15.—9 A.M. Pulse 116; temperature 101·6°. Dulness over back of chest much diminished, breathing still harsh; dulness over lower part of sternum remains. Loud pericardial friction. Impaired percussion, resonance and tubular breathing over right front of thorax.

9 P.M.—Pulse 112; temperature 100·6°.

17.—9 A.M. Pulse 132; temperature 100·8°. Quite free from pain in joints; complains of soreness and dryness of fauces.

9 P.M.—Pulse 136; temperature 100·6°.

18.—9 A.M. Pulse 126; temperature 99·8°. Pulse irregular in force and rhythm. Dulness of thorax everywhere clearing up. Complains of pain in the præcordia, and of dyspnœa.

9 P.M.—Pulse 124; temperature 101·4°.

19.—9 A.M. Pulse 124; temperature 101·6°. Urine free from albumen; loud pericardial friction still audible.

9 P.M.—Pulse 128; temperature 101·5°.

20.—9 A.M. Pulse 118; temperature 101°. Is feeling much better.

9 P.M. Pulse 128; temperature 102°. Has been very sick.

21.—9 A.M. Pulse 116; temperature 98·4°. Sickness continues.

9 P.M.—Pulse 118; temperature 101°.

22.—9 A.M. Pulse 140; temperature 102·6°. Has again been very sick; omit salicin, and take effervescing medicine every four hours. From this time the patient made slow but steady progress. The temperature ranged from 99° to 101·4° until after February 4, and the pulse from 90 to 136; there was no return of rheumatic pains, and the chest soon cleared up; the patient was discharged convalescent on March 8, but with a systolic apex murmur.

SUMMARY.

It will be convenient to summarise the results of the treatment in each of these cases before proceeding to deduce any conclusions from them as to the value of the remedy.

No. I.—The patient, who was suffering from a primary attack, had been ailing for several days, when he came under observation. He was put upon full doses of salicin the day after admission, when, judging by the peculiar rhythm of the heart, pericarditis was already commencing. The temperature began to fall on the third day after salicin was prescribed, and became normal on the sixth day; the pains abated on the second day, and entirely ceased on the fifth day. The salicin was taken regularly every two hours for six days, then for two days every four hours, and again for nine days every six hours. Rheumatic pains now began to reappear, and a mild relapse occurred, for which the salicin, which had never been altogether discontinued, was again prescribed more frequently. Epistaxis set in the day after the patient commenced taking salicin, and continued from time to time for several days. It returned again three days after the frequency of the dose was increased. On the fifth day after beginning the salicin the pulse and the impulse of the heart became very feeble, requiring the administration of stimulants. The pain and stiffness of joints and sour sweating did not entirely cease for some time, and the patient was not discharged until the 66th day after admission.

No. II.—The patient had been ailing fourteen days when he was admitted for his sixth attack of rheumatic fever. He already had old mitral disease, and pericarditis was present, before he was put upon the treatment with salicin. The pain diminished on the second and ceased on the sixth day from beginning to take salicin; the temperature fell on the third, and became normal on the fifth day. The salicin was given every two hours for six days; it was then reduced

in frequency to every four hours, but the pains recurred on the following day, and on the fourth day a relapse ensued, rendering it necessary to increase the frequency of the dose again to every two hours. On the eighth day of treatment with salicin sickness supervened, and after the expiry of ten more days the vomiting and headache became so severe that it was necessary to discontinue the remedy. Pleurisy supervened after the salicin had been prescribed, and during the second course of treatment pericarditis returned a second time. The patient was subsequently treated with iodide of potassium and quinine, but was not fit to be discharged until he had been 107 days in hospital.

No. III.—The patient had been ailing for several weeks when admitted for a first attack of rheumatic fever. Pericarditis was already present. She was put upon salicin the day of admission. The pains diminished very rapidly, and the temperature became normal on the fourth day from commencing the medicine. On the fifth day the first sound of the heart became so feeble that brandy was ordered to be given every three hours. The salicin was given every two hours for six days, then three times a day for two days, and finally discontinued on the eighth day. Discharged convalescent, but with an apex systolic murmur, on the 25th day after admission.

No. IV.—Patient had been ailing for some days when admitted for a third attack of rheumatic fever, but the disease was not fully developed until the day after admission. There was already old mitral disease. Two days after admission salicin was prescribed. The temperature soon fell to the normal standard, but the pains and sour sweating did not subside with it, and pericarditis supervened two days after the salicin had been commenced. The salicin was administered every two hours for four days, then every four hours for ten days, when it was discontinued. A mild relapse now ensued, which was treated with iodide of potassium; and the patient was discharged convalescent on the 58th day.

No. V.—Patient was admitted for a relapse after a mild third attack of rheumatic fever. Salicin was prescribed on the second day after admission, when pericarditis already existed. The temperature soon became normal, and the pains greatly subsided by the fourth day, but some sour sweating and pain and stiffness of joints continued for several days longer. Epistaxis supervened, and the pulse became small and feeble on the second day after the commencement of treatment,

rendering necessary the administration of brandy. The salicin was given every two hours for five days, then every four hours for three days, and finally omitted on the eleventh day. The patient was twenty days in hospital.

No. VI.—Patient was admitted into hospital for a primary attack of rheumatic fever on the third or fourth day of her illness. Salicin was prescribed on the third day; it was given every two hours for five days, then every four hours for four days, and every six hours for two days. The temperature fell to the normal standard and the pain subsided two days after commencing to take salicin, being about the eighth or ninth day of the disease. Notwithstanding this pericarditis developed when she was fully under the influence of the remedy. The pulse became very feeble, and sickness and pain in the epigastrium supervened nine days after the commencement of treatment. The sickness and epigastric pain not being relieved by the reduction of the salicin to a dose every six hours, it was omitted on the eleventh day. These symptoms now disappeared, but two days afterwards pains returned in one of the hands, and subsequently in the knees and feet, coincidently with a rise of temperature to 101·8°. Salicin was not again prescribed, but this relapse soon passed off, and the patient was discharged on the 46th day after admission.

No. VII.—Patient was admitted into hospital on the third day of a primary attack of rheumatic fever. The temperature had already fallen somewhat before salicin was prescribed. It became quite normal in three days, but the pains and sour sweating subsided more slowly. The salicin was given every two hours for ten days, when it was reduced to a dose every four hours, and was not finally discontinued until the 23rd day. No marked physiological effects followed its administration. The patient was discharged on the 45th day.

No. VIII.—Patient, a married woman, was nursing an infant when admitted, about the tenth day of a second attack of rheumatic fever. The temperature fell rapidly, and became quite normal, and the joint pains subsided within thirty-six hours from commencing to take salicin. After taking salicin every two hours for four days the pulse became very feeble; the medicine was then reduced to a dose every four hours, and was entirely omitted on the twelfth day. The patient was discharged convalescent on the 23rd day.

No. IX.—Patient was admitted on the third day of a

second attack of rheumatic fever, complicated with pneumonia. He was placed under treatment, with salicin, on the second day. The temperature did not fall materially for eight days, and did not become normal until the tenth day, during all of which salicin was given in doses of 20 grains every two hours. The fall in temperature coincided with great improvement in the condition of the lungs, but the joint pains and sour sweating continued for a day or two longer. The sounds and impulse of the heart became very feeble on the twelfth day of treatment, when the frequency of the dose of salicin had been already reduced to every four hours. The patient was discharged on the 33rd day.

No. X.—Patient was admitted for a second attack of rheumatic fever, complicated with double pneumonia and hæmaturia, on the sixth day. There was a systolic murmur on admission, and pleuritic and loud pericardial friction subsequently developed. He was put upon full doses of salicin the day after admission into hospital. The pains in the joints disappeared on the seventh day of treatment, coincidently with considerable amendment in the condition of the lungs and the disappearance of the albuminuria; but the temperature remained high until after the salicin had been discontinued, on account of persistent and uncontrollable sickness. It was necessary to give full doses of chloral and morphia for many nights in order to secure rest, and brandy was freely and methodically administered. Ether and ammonia were also required from time to time, on account of feeble and irregular action of the heart and dyspnœa. The salicin was given in doses of 20 grains every two hours for seventeen days. It caused sickness at a very early period; and, after a few days, dryness and soreness of the throat. The patient was discharged on the 58th day, at which time there was a distinct systolic apex murmur.

Remarks.—This experience of the effects of treating rheumatic fever with salicin was, on the whole, not so satisfactory as to encourage me in continuing to employ it. In the uncomplicated cases, indeed, the temperature appeared to be reduced, and the pains somewhat to subside, under its use; but in cases Nos. I., II., IV., and VI. relapses occurred when the salicin was either discontinued or the frequency of the dose diminished. Of the remaining cases, No. III. had already been ill for some time, and his disease may be presumed to have been approaching its close before he came under treatment; and case No. V. had already been laid up

at home with a mild attack of rheumatic fever when he was admitted for a relapse, which would probably have recovered quite as rapidly under rest in bed and hospital diet. Cases Nos. IX. and X. were complicated with pneumonia. The salicin did not appear to exert any influence upon their progress, and did not reduce the temperature, which only subsided with the abatement of the lung ailment. These cases, in short, ran very much the same course similar cases run under other treatment.

On the other hand, salicin appeared to produce some inconvenient consequences. In case No. I. epistaxis very soon ensued after the patient commenced its use. This might have been regarded as accidental, but it is at least significant that the bleeding returned when, after an interval, it became necessary to increase the frequency of the dose. Epistaxis also occurred in Case No. V., coincidently with feebleness of pulse on the second day after salicin was prescribed. Marked depression of the power of the heart ensued in cases Nos. I., III., VI., and VIII. whilst the patients were taking salicin, and entirely subsided after it was discontinued. Nausea and sickness occurred in cases Nos. II. and VI., associated in the former with headache, and in the latter with severe epigastric pain. Lastly, the detention of the patients in hospital was not shortened by the treatment with salicin; on the contrary, if we except cases Nos. III. and V., which have already been said to have been approaching their close when admitted, and case No. VIII., which improved rapidly after lactation was stopped, the patients treated with salicin recovered more slowly than is common in cases of similar severity treated by other methods, their average residence in hospital having been 55 days.

LIII.—*Cases of Rheumatic Fever treated with Salicylate of Soda.* By Edward Headlam Greenhow, M.D. *Read May* 14, 1880.

THESE cases, fifty in number, are too numerous to allow of their being read to the Society, even in abstract. I shall therefore only read such a selection of them as may suffice to show the effects of the treatment, but shall comprise brief reports of them all in my Paper in order that the whole of the evidence I have collected may be published in

the 'Transactions.' The plan which I followed, both as regards the selection of cases for observation and their general management, having been already described in the beginning of my communication on the treatment of rheumatic fever with salicin, it is unnecessary to repeat that explanation here.

The cases were of very various degrees of intensity and character. Two of them passed into hyper-pyrexia after being placed under treatment with salicylate of soda, and ultimately recovered under the use of cold baths; two others were attended by complications which soon led to a fatal result; six others were attended by serious pulmonary complications; fourteen cases were of so mild a character that they would probably have done equally well under simple saline treatment, combined with an occasional aperient or sedative, and hospital rest and diet; the remainder were cases of severe rheumatic fever, in the treatment of which the value of salicylate of soda was fairly tested. I shall now proceed to relate them in the order in which I have named them.

Case I.

J. P., æt. 28, housemaid, admitted July 18, 1877. Had rheumatic fever eight years since; is a nervous, hysterical woman; present illness commenced with stiffness and pains in the lower limbs on the 16th inst.

State on Admission.—Pulse 96; temperature 101·8°; urine sp. gr. 1034, normal. Complains of pain in almost all her joints, especially those of the right leg and both arms; skin moist and hot; breath-sounds normal; apex of heart beats in the fourth and fifth interspaces, just within the nipple line, the impulse is forcible and attended by a faint thrill; the first cardiac sound at the apex is long, loud, and accompanied by a slight murmur, the second is reduplicated at the base; loud pericardial friction over the præcordia.

Take twenty grains of salicylate of soda every four hours.

9 P.M.—Pulse 92; temperature 102·4°.

19.—9 A.M. Pulse 108; temperature 101·6°. Sweating profusely, slept after a subcutaneous injection of morphia; face flushed; condition of heart and pains of joints as yesterday.

9 P.M.—Pulse 112; temperature 101·2°. Has now pain only in the right elbow, right knee, and both feet; copious sour sweating.

20.—10 A.M. Pulse 96; temperature 100·2°. Slept well;

is free from pain except in the right leg; pericardial friction still continues. Deafness.

Take the salicylate only every six hours.

9 P.M.—Pulse 100; temperature 102·0°. Slight pain in both knees and right ankle.

Resume the salicylate every four hours.

21.—9 A.M. Pulse 84; temperature 101·6°; pulse soft and compressible; nose bled a little during the night; feels very sick; is still deaf, and fancies that she hears music; became very faint this morning on being raised up; pain in the knees on movement only, none elsewhere.

To have a dessert-spoonful of brandy every four hours.

8.30 P.M.—Pulse 88; temperature 103·1°. Has now pain on movement in the right knee only; is very deaf, still thinks she hears music; has had return of epistaxis; body covered with red miliary rash; pericardial friction and cardiac murmur unchanged.

22.—10 A.M. Pulse 100; temperature 104·2°. Has again had epistaxis this morning; wandered much during the night, saying that she saw and heard strange things, and trying repeatedly to get out of bed; was ordered a draught with chloral and morphia, but did not sleep after it; is cheerful and answers questions correctly this morning; is still very deaf, and has occasional twitchings of the face and hands.

12 NOON.—Pulse 116; temperature 105·8°. Patient says that she is burning and must get out of bed or she will be roasted. The salicylate was now discontinued, and the case was treated with cold baths and large doses of quinine. During the next four days she had five cold baths; but, as she did not resume the salicylate, it is not necessary to follow the details of the case any further. She was discharged well on September 17.

CASE II.

J. P., æt. 28, blacking maker, admitted January 4, 1878. Father suffered from rheumatism, and patient himself had rheumatic fever in boyhood, otherwise his health has been good. Is of temperate habits. Present illness commenced a few days before admission with pain in the right knee, soon followed by pain in other joints and attended by profuse sweating. Attributes his illness to exposure to cold and wet.

State on Admission.—Pulse 108; temperature 101·4°.

Knees, ankles, elbows, and wrists swollen, hot, red, and very painful; face much flushed, skin moist; lungs normal; heart's apex in normal position, first sound rather prolonged and rough at the apex, second muffled.

10 P.M.—Pulse 120; temperature 99·6°. Profuse sour sweating; urine sp. gr. 1022, acid, normal; restless.

Take a full dose of chloral and morphia at once.

5.—9 A.M. Pulse 120; temperature 100·8°. Slept well after the sedative draught; pains and sweating continue; heart sounds clean; faint thrill at apex of heart.

10 P.M.—Pulse 124; temperature 101·4°.

6.—10 A.M. Pulse 120; temperature 101·4°. Slept badly, although he had an opiate; pains and sweating continue.

Take 15 grains of salicylate of soda every two hours.

10 P.M.—Pulse 126; temperature 101·8°.

7.—10 A.M. Pulse 120; temperature 101·2°. Pains rather easier; sweating continues; trunk covered with sudamina and red miliary rash.

9 P.M.—Pulse 120; temperature 103·4°. Tongue dry and brown in centre; breathing shallow; complains of giddiness and headache; manner strange; has vomited several times.

Repeat sedative draught; take salicylate only every six hours.

8.—10 A.M. Pulse 112; temperature 101·6°. No pain, giddiness, or headache; skin moist; restless; tremors; dry râles over front of lungs; heart's sounds clean; pulse of good volume and force.

9 P.M.—Pulse 116; temperature 102·6°. The temperature has varied much from time to time during the day, and has several times been as high as 103·2°.

9.—10 A.M. Pulse 108; temperature 102·8°. More pain in joints; slept badly; profuse sour sweating continues. In the course of the day the temperature rose to 104·0°, and ranged from 104·0° to 104·8° during the following night. The patient slept only by snatches, and often awoke noisy and wandering, throwing himself about and endeavouring to leave his bed. The salicylate was now discontinued. Next day, January 10, the temperature rose to 105·4° in the axilla, and 107·4° in the rectum. The case was now treated with cold baths and quinine, with a moderate quantity of brandy.

Pericarditis supervened on January 11, but the patient made a good recovery, and was discharged to a convalescent hospital on March 4.

Case III.

E. C., æt. 40, servant, admitted December 10, 1879. Patient had a very severe attack of rheumatic fever in girlhood, and has, from that time, been subject to rheumatic pains and to cough in winter. Present illness commenced with pains in the knees and hips after sleeping in a damp bed.

State on Admission.—Pulse 90; temperature 101·0°. Pains, swelling, and tenderness in both wrists, knees, and left shoulder; percussion resonance impaired in the right infra-clavicular region, and also over the upper part of the right back of thorax; dry râles are heard all over both lungs, and a few faint crackles in the apex of the right lung; a musical systolic murmur at the apex of heart, also audible at the angle of scapula; second sound very faint.

11.—9 A.M. Pulse 96, temperature 101·0°; urine sp. gr. 1026, normal. Slept badly; general condition unchanged.

9 P.M.—Temperature 100·4°.

12.—9 A.M. Pulse 84; temperature 101·2°. Face much flushed; profuse sour sweating; pulse irregular in rhythm; second cardiac sound much more distinct than yesterday; rhonchus and sibilus over both lungs; pains continue, though they have somewhat changed their seat.

Take 15 grains of salicylate of soda every two hours, and 2 drachms of brandy every four hours.

9 P.M.—Pulse 96; temperature 101·2°. Has severe pain in both knees and ankles; sweating freely.

13.—9 A.M. Pulse 76; temperature 99·0°. Is deaf, and complains of a buzzing noise in the ears; slept very badly; had severe pain in the left knee and ankle during night; heart's action feeble and irregular; sweating freely; has slight pain in the left side; pleuritic friction at seat of pain.

Reduce the salicylate to a dose every four hours, and increase the brandy to half an ounce every three hours.

9 P.M.—Pulse 96; temperature 98·4°. Has been much e sier during the day.

14.—9 A.M. Pulse 95; temperature 98·0°. Slept fairly; is quite free from pain; pulse very irregular and intermittent; heart's action irregular, but impulse forcible; systolic murmur less distinct; does not sweat so much.

Omit salicylate. Continue brandy, and give ether and ammonia draught occasionally.

9 P.M.—Temperature 97·2°. Complains of difficulty in breathing; no pain in joints.

15.—9 A.M. Is breathing with difficulty; pulse very small and rapid; heart's action fairly strong but irregular; is quite sensible, and not so deaf.

Died rather suddenly, soon after the note was taken.

Post-mortem Examination.—The pericardium was found to be everywhere firmly adherent, the heart hypertrophied and dilated, its muscular substance somewhat fatty, and both the mitral and tricuspid valves diseased. The lungs were highly emphysematous, adherent, and congested; the kidneys were congested, tough, and slightly granular.

Case IV.

S. A. B., æt. 19, servant, admitted June 4, 1877. Patient was too ill to allow of our obtaining any definite previous history, but she had been under medical care for five days, suffering from rheumatic fever and pleuro-pneumonia before her admission.

State on Admission.—Pulse 140; temperature 103·4°; respirations 52. There is consolidation of the lower lobe of the right lung; cantering rhythm of heart; a systolic murmur at the apex, also audible at the angle of the left scapula; constant orthopnœa; very profuse sour sweating, and pains in most of the large joints; urine sp. gr. 1030, normal.

Take 15 grains of salicylate of soda every hour for six hours, and then every two hours; take half an ounce of brandy every three hours.

Within twenty-four hours from commencing to take the salicylate the temperature fell to 98·5°, the pulse to 124, and the respirations to 24. This improvement was, however, only of short duration, for during the next twenty-four hours the temperature rose again to 103·0°, and was never subsequently found below 100·5°. On the second day of the treatment with salicylate of soda the patient complained of severe headache, became very deaf, and wandered, seeing, as she supposed, strange objects, and hearing noises. The temperature continuing high, and there being no improvement in the condition of the patient, the salicylate was discontinued on the third day. The patient died on June 13, the eleventh day after admission.

Post-mortem Examination.—Lungs adherent throughout to walls of chest; lower lobes consolidated and granular on

section; pericardium firmly adherent; muscular tissue of heart flabby and pale coloured; auricular borders of mitral valve studded with small bead-like prominences; ventricular surface of aortic valves studded with similar bodies.

Case V.

W. B., æt. 40, porter, admitted September 24, 1877. Father and one brother rheumatic; has not previously had rheumatism, but had chorea in boyhood; present illness began on September 15, with pain, swelling, and tenderness of both ankles, but he was not disabled from work until three days ago, when several other joints became affected.

State on Admission.—Pulse 96; temperature 100·8°; urine sp. gr. 1025, acid, normal; skin hot; high-pitched musical murmur with the systole at apex of heart, coarse to and fro sounds at base.

10 P.M.—Pulse 84; temperature 102·8°; sweating freely.

Take chloral and morphia at bedtime.

25.—10 A.M. Pulse 84; temperature 102·0°. Slept well after the draught. Pain and swelling of both ankles and right knee; loud friction over heart, systolic murmur audible both at apex and also at angle of scapula; breath sounds rough in bases of lungs; faint crackle at extreme base of right lung.

10 P.M.—Pulse 96; temperature 103·2°. Has pain in both knees.

26.—10 A.M. Pulse 96; temperature 101·6°. Slept well; pain in both knees and ankles; condition of heart unchanged; resonance much impaired over the posterior bases of both lungs; harsh breathing in base of right lung; crepitation in extreme bases of lungs.

Take salicylate of soda 15 grains every two hours; apply two leeches to præcordia.

10 P.M.—Pulse 92; temperature 102·2°. Free sweating; muttering in his sleep.

27.—10 A.M. Pulse 88; temperature 100·2°. Is deaf and rather heavy; slept well; loud rough friction over whole of præcordia, disguising the heart sounds; deficient resonance over lower part of back of chest on both sides; breath sounds harsh in bases of lungs; large crepitation in base of left; smaller and scantier in base of right lung; increased vocal resonance; slight pain at præcordia; sweating freely.

Continue salicylate and take half an ounce of brandy every three hours.

10. P.M.—Pulse 88; temperature 101·6°. Is free from pain; feels comfortable; cough troublesome.

28.—10 A.M. Pulse 72; temperature 99·0°. Slept well with aid of a sedative draught. Left side of chest appears larger than right; area of cardiac dulness extends from the third rib downwards, and from the middle of sternum to outside the nipple. Urine, sp. gr. 1025, alkaline, free from albumen.

10 P.M.—Temperature 99·4°.

29.—10 A.M. Pulse 88; temperature 99·4°. Free from pain; no change in heart or lungs. Cardiac dulness extends 4 inches downwards from third rib, and 5 inches transversely from near mid-sternum to outside of nipple. Take salicylate of soda only every four hours.

10 P.M.—Pulse 92; temperature 100·2°. Perspiring; slight epistaxis.

30.—10 A.M. Pulse 84; temperature 99·2°. Upper margin of cardiac dulness is in first interspace; more bulging of præcordia; friction still exceedingly loud, though less so than it was; dulness of right back greatly decreased. Crepitation in base of left lung.

10 P.M.—Pulse 96; temperature 100·2°.

Oct. 1.—10 A.M. Pulse 88; temperature 98·6°. No pain; upper margin of cardiac dulness corresponds with upper border of third rib; still obvious bulging of cardiac area; loud pericardial friction. Resonance over lungs very much improved; dry râles in lungs.

10 P.M.—Temperature 99·2°.

2.—10 A.M. Pulse 84; temperature 99·8°. Free from pain. Scanty dry râles over both lungs and a little crackling in base of left lung. Pericardial friction; systolic murmur at apex, as on admission.

10 P.M.—Pulse 76; temperature 100·5°. Sweating.

The temperature now varied little for some days, being daily rather above 99° in the morning, and from 100° to 101° in the evening. The pulse ranged from 80 to 90. Sweating continued, and the condition of the heart and lungs improved slowly, but steadily. The salicylate was omitted on October 6. Next day the temperature rose to 101° in the morning, and 103° in the evening. No other change took place, but copious sweating continued.

11.—10 A.M. Pulse 96; temperature 103°. Pain and tenderness of præcordia; loud pericardial friction; bowels loose. Take 15 grains of salicylate of soda every three hours.

10 P.M.—Pulse 88; temperature 102·6°.

12.—10 A.M. Pulse 100; temperature 101·8°. Loud pericardial friction; no pain in joints; copious sweating.

10 P.M.—Pulse 92; temperature 100·2°.

The temperature now again ranged from 99° to 100·5° until October 18, when it became normal, and remained so until November 18. The salicylate of soda was reduced to a dose every six hours on October 15, and entirely discontinued on the 18th. On November 18, after having been in the garden the previous day, the temperature rose to 101·4°, and the pulse to 112; pains in, first, the right ankle, and subsequently both ankles, wrists, hands, and elbows, now set in, and continued for some days. This attack passed off without any special treatment, and the patient was discharged, but with mitral disease, on December 7.

Case VI.

F. H. B., æt. 13, errand boy, was admitted April 9, 1878. Was in the hospital for rheumatic fever in May 1877. Has been quite well since his discharge until a few days since, when, whilst heated with active exercise, he lay upon the grass and took cold. Next day he experienced pains in the knees and ankles, but continued at work until yesterday, when the pains became aggravated, and he began to suffer from cough.

State on admission.—Pulse 126; temperature 101·4°. Knees and ankles hot, tender, and swollen; has slight sore throat and a husky cough. Rhonchus over front of both lungs; coarse crepitation behind, especially in the supra-spinous fossæ; percussion resonance rather impaired below both clavicles. Heart's apex in the normal situation; systolic apex murmur, audible also over the præcordia; urine, sp. gr. 1030, acid.

9 P.M.—Pulse 126; temperature 102°. Sweating freely.

April 28.—9 A.M. Pulse 108; temperature 102·6°. Slept badly; no pain in ankles, and less in knees, this morning; severe pains in left elbow-joint, in both wrists, and in fingers of right hand; pericardial friction near apex of heart.

Take 15 grains of salicylate of soda every two hours.

9 P.M.—Pulse 102; temperature 101·6°. Complains of severe pain at the epigastrium, and of shortness of breath; loud friction over præcordia; profuse sour sweating.

29.—9 A.M. Pulse 108; temperature 99·2°. Pulse feeble; complains much of pain in the præcordia; still sweating.

9 P.M.—Pulse 108; temperature 99·8°.

30.—10 A.M. Pulse 108; temperature 100·6°. Feels generally better, but cough is troublesome, and has occasional shooting pain in the left mammary region. Sputum frothy and transparent.

10 P.M.—Pulse 126; temperature 100·8°.

May 1.—10 A.M. Pulse 118; temperature 100·4°. Passed a restless night; pericardial friction continues. Cough troublesome.

9 P.M.—Temperature 99°.

2.—10 A.M. Pulse 100; temperature 98·8°. Is much better. Take salicylate only every six hours.

9 P.M.—Temperature 99°.

For several days the temperature ranged from 99° to 100·4° in the morning, and from 100·8° to 103·4° in the evening. The pulse ranged during the same time from 90 to 107. On May 8 the salicylate was ordered to be given every three hours, but this produced no effect on the temperature or pulse. Loud pericardial friction continued, the cough became more troublesome; dulness on percussion, and abundant crepitation, were now found over the base of the left lung; rhonchus and sibilus generally over both lungs. On May 11 the breathing was much distressed; and, the temperature continuing high, the salicylate was discontinued, and small doses of antimony and ether prescribed. The symptoms were now for several days those only of broncho-pneumonia and pericarditis, but somewhat later there was a recurrence of rheumatic pains and swelling in many joints. Salicylate was not again administered, and the patient was discharged well, save a mitral regurgitant murmur, on June 27.

Case VII.

M. D., æt. 18, laundry-maid, was admitted May 7, 1878. Patient had rheumatic fever three years ago, otherwise her health has been good. Father died of phthisis. Present illness was caused by exposure to cold a few days since. Has had pain and swelling of the principal joints of her lower limbs, and has also been coughing and spitting blood-stained sputum.

State on admission.—Pulse 114; temperature, 103·1°. Complains of severe pain in her wrist, knee, elbow, and ankle joints, all of which are more or less swollen, red, hot,

and tender; she also complains of a sharp cutting pain in the left lower axillary region, increased by deep breathing; there is tenderness over the præcordia and pericardial friction near the apex of the heart. Movement causes so much distress that a full examination of the lungs cannot be made.

9 P.M.—Pulse 108; temperature 103·6°. Profuse sour sweating.

May 8.—8 A.M. Pulse 108; temperature 102°. Did not sleep, although she had a sedative. Urine, sp. gr. 1018, acid, a slight trace of albumen; complains much of pain in the right shoulder.

Take 15 grains of salicylate of soda every two hours.

9 P.M.—Pulse 102; temperature 101·4°. Pleuritic friction below the anterior border of the left scapula in seat of pain.

9.—9 A.M. Pulse 96; temperature 100·6°. Profuse sweating and pericardial friction continue.

9 P.M.—Pulse 102; temperature 101°. Is free from pain in wrists and elbows. Is very restless.

10.—9 A.M. Pulse 102; temperature 99·8°. Has had slight epistaxis; was wandering during the night, but had some quiet sleep. Complains much of pain on the left side of chest.

Port wine 1 ounce every six hours.

9 P.M.—Pulse 90; temperature 100°. Has had return of epistaxis. Breath sounds almost normal; pericardial friction not so intense.

11.—10 A.M. Pulse 90; temperature 99·8. Free from pain; deaf; has been restless and delirious during night.

10 P.M.—Pulse 100; temperature 102·2°. Continues restless and wandering.

12.—10 A.M.—Pulse 108; temperature 100·6°; respirations 48. Complains of pain in the præcordia; pericardial friction continues; impaired percussion resonance over lower half of left back of thorax; crepitation over dull area.

Take half an ounce of brandy every three hours.

9 P.M.—Pulse 126; temperature 100·4°; respirations 48. Is wandering, but free from pain.

On May 13 the patient had been very delirious during the night; the temperature rose to 101°, and the pulse to 132, and the salicylate of soda was omitted. For several days there was little change, the temperature having ranged from 101° to 103·4°. On May 17 the temperature rose to 103·8°, and large doses of quinine were prescribed and continued

for some time. The temperature subsequently rose to 104·7°, and on two occasions to 105°; but, as salicylate of soda was not again prescribed, it is needless to follow any further the course of the case. The patient was discharged, fairly well, on July 12.

Case VIII.

H. P., æt. 22, porter, was admitted October 26, 1878. Had rheumatic fever seven years ago; has suffered from occasional cough, and has sometimes observed that his sputum has been streaked with blood. Is of temperate habits. Present illness commenced on the 24th inst. with shivering, followed by pains in the hips and knees. Attributes his illness to exposure to cold and wet.

State on admission.—Pulse 102; temperature 99·8°. Has pain in the right shoulder and in both knees, which are tender but not swollen. A slight systolic murmur at the apex of heart; sibilus over both lungs, before and behind.

9 P.M.—Pulse 100; temperature 101·2°.

October 27.—9 A.M. Pulse 104; temperature 100·6. Knees very painful; heart's impulse seen and felt over a wide area.

9 P.M.—Pulse 100; temperature 101·0°.

28.—8 A.M. Pulse 96; temperature 99·4°. Pulse feeble; slight friction at base of heart, increased by pressure.

1 P.M.—Temperature 102°.

Take 15 grains of salicylate of soda every four hours.

9 P.M.—Pulse 96; temperature 100·8°. Right knee less painful; other joints unchanged.

29.—10 A.M. Pulse 84; temperature 98·6°. Patient feels much better; the chief pain is now in the right shoulder and left knee. First sound of heart very weak; slight giddiness; dry râles in both lungs.

Take half an ounce of brandy every four hours.

9 P.M.—Temperature 100°.

The temperature now became quite normal, and sometimes subnormal, and the pulse, for some days, ranged from 48 to 66. The pains and cough had entirely ceased by November 2, and no adventitious sounds were audible in the lungs, but there was still copious sweating, and the systolic murmur was still heard at the apex of the heart; the second cardiac sound was reduplicate at the base. The salicylate was reduced to a dose every six hours on October 31, to three times a day on November 5, and entirely discontinued

on November 7. On November 12 there was pain in the left sterno-clavicular articulation, and next day the pulse rose to 90, and the temperature to 99·6°. The left knee was now swollen and painful, there was return of cough, and the breathing was rough in the bases of the lungs.

November 14.—9 A.M. Pulse 124; temperature 99·2°. Has pain in left knee, right shoulder, and wrist, with return of bronchitis; is again sweating much; heart's rhythm cantering.

9 P.M.—Pulse 108; temperature 99·8°.

15.—9 A.M. Pulse 112; temperature 100·4°.

9 P.M.—Pulse 116; temperature 100·8°.

16.—9 A.M. Pulse 104; temperature 100·6. Pains continue in shoulders and wrists; heart's rhythm cantering; systolic apex murmur; cough less troublesome.

Take salicylate of soda 15 grains every six hours.

9 P.M.—Pulse 116; temperature 100·5°. Cannot sleep on account of pain.

Take chloral and morphia at bedtime.

17.—9 A.M. Pulse 112; temperature 100·6°.

9 P.M.—Pulse 100; temperature 100°.

18.—9 A.M. Pulse 96; temperature 99·2°. Still has pains and swelling in the arms and hands; is perspiring freely; slept well without a sedative. Urine, sp. gr. 1034, acid.

9 P.M.—Pulse 100; temperature 98·6°.

From November 18 to December 3 the temperature rarely exceeded 98·6°, and the pulse ranged from 72 to 80. There were no pains, and the urine was normal. On November 22 the salicylate was reduced to three doses daily, and entirely omitted on November 30. Three days later there was a return of pain in the hands; the pulse increased in frequency, and the temperature again rose to over 100°. There was likewise a return of pericarditis and cough. For this relapse quinine and iodide of potassium were prescribed, and the patient was finally discharged on December 31.

Case IX.

A. M., æt. 16, was admitted December 27, 1878. Mother died of heart disease, the consequence of rheumatic fever; patient has herself been healthy. Present illness commenced three weeks ago, with pains in several joints, but became worse two days since, when she also suffered from sore throat, and was obliged to take to bed.

State on admission.—Pulse 126; temperature 103·4°. Countenance anxious; complains of pain in almost all her joints; the præcordial dulness is increased outwards and upwards, and a thrill is felt over the whole cardiac region; heart sounds clean; no pericardial friction audible.

9 P.M.—Pulse 104; temperature 103·2°. Has wandered and been very restless.

Dec. 28.—9 A.M. Pulse 128; temperature 103·3°. Has had a very restless, delirious night; complains of severe pain in both shoulders; is constantly moaning and crying out from pain; heart sounds normal; pulse regular and of good force.

Take 15 grains of salicylate of soda every two hours.

9 P.M.—Pulse 120; temperature 103·2°.

29.—9 A.M. Pulse 104; temperature 100·2°. Slept better; much less pain. Slight deafness; tongue dry, and brown in centre. Area of cardiac dulness has decreased; apex beats half an inch below and within nipple; faint thrill continues.

9 P.M.—Temperature 101·2°. Has been sick.

30.—9 A.M. Pulse 104; temperature 99·6°. Has slept badly, and is very fretful. Free from pain in joints. No increase of deafness. Slight tenderness over præcordia; first cardiac sound murmurish at apex; lung sounds normal; is rather prostrate. Pulse compressible.

Take the salicylate only every four hours; to have one tablespoonful of wine every three hours.

7.30 P.M.—Pulse 104; temperature 101·6°.

31.—9 A.M. Pulse 104; temperature 102·8°. Slept well after a sedative; deafness not increased. Has some diphtheritic-looking patches on the fauces, the first of which appeared yesterday. Musical systolic murmur audible over præcordia. Urine sp. gr. 1025, acid, albumen a trace, no blood. Percussion resonance impaired over the upper half of back of thorax on both sides; breathing harsh, expiration prolonged, except over apex of left lung, where the dulness is more marked, and the breath sounds feeble.

9 P.M.—Pulse 120; temperature 102·1°. Soon after six o'clock she became noisy, violent, and restless, throwing herself about and manifesting hallucinations, saying that she saw persons and things. A papular rash has come out upon the face.

Omit salicylate of soda. Take a chloral and morphia draught.

Jan. 1, 1879.—9 A.M. Pulse 88; temperature 99·6°. Diphtheritic patch on fauces has spread somewhat; has pain in

shoulders, and indefinite wandering pains in limbs; rash on face less marked; systolic murmur continues, and there is well-pronounced friction over præcordia. Continues deaf; pupils dilated. Slight delirium. Restless.

9 P.M.—Pulse 72; temperature 100·2°.

2.—9 A.M. Pulse 60; temperature 99·8°. Slept well; fauces improving; faint crackling in base of left lung; is quieter and free from jactitation and twitchings of face and limbs; systolic murmur continues; friction has ceased to be audible; complains of pains in limbs.

9 P.M.—Pulse 76; temperature 101·4°.

3.—9 A.M. Pulse 84; temperature 101·8°. Dulness on percussion still continues; breath sounds weak; rhonchus and occasional crackling over whole of left lung; slight pains in most joints, several of which are hot; heart sounds unaltered.

During this day the temperature gradually rose to 103·8° at 6 P.M.

9 P.M.—Pulse 108; temperature 103·6°.

4.—10.30 A.M. Pulse 100; temperature 104·0°. Joints of lower limbs have become very painful, and the knees swollen; sudamina have appeared on the chest; slept well after a full sedative.

Take 30 grains of salicylate of soda every two hours for three doses.

The temperature gradually fell during the day.

9 P.M.—Pulse 88; temperature 100·2°.

5.—10.30 A.M. Pulse 88; temperature 100·4°. Dulness over bases of lungs decreased; large crepitation over back of chest; heart murmurs less intense; area of cardiac dulness still too large; pains in joints less.

Take salicylate of soda, 30 grains every two hours for three doses.

9 P.M.—Pulse 112; temperature 100·2°.

6.—9 A.M. Pulse 84; temperature 99·8°. Improving.

Repeat salicylate of soda, 30 grains every two hours for three doses.

9 P.M.—Pulse 76; temperature 99·2°. No pain in joints; was sick after last dose of salicylate.

7 to 11.—During these days the temperature ranged from 97·8° to 99·3°, and the pulse from 68 to 80. There were no pains, and the salicylate was given in doses of 30 grains three times on the 7th, and once on the 8th, 9th, 10th, and 11th. She was sick on the 8th, after the salicylate had been reduced to once daily.

On the 11th there was pleurisy on the left side, and pains were complained of in the limbs.

9 P.M.—Pulse 76; temperature 106·6°.

Repeat salicylate of soda, 30 grains at intervals of two hours for three doses.

From January 12 to 17 there was no great change; the pains left after the salicylate was resumed; the temperature ranged from 98·4° in the early morning, to 100·5° at night; the pulse from 76 to 88. The physical signs were pleuritic friction and dulness on percussion over the left side of chest, and faint systolic murmur with reduplication of the second sound of heart.

The salicylate of soda was continued in 30-grain doses three times daily, at intervals of two hours between the doses.

17.—Patient again complains of pains in the limbs, although the salicylate has been continued.

9 A.M.—Pulse 84; temperature 99·6°; urine sp. gr. 1015, not albuminous.

Take 15 grains of salicylate of soda every four hours.

9 P.M.—Temperature 99·2°.

From January 18 to 23 the temperature ranged from 99·8° to 100·8°, the higher point being always in the evening; the pulse from 88 to 96. On January 21 the urine presented a trace of albumen, and a prefix to the systole was heard at the apex of the heart. The patient being now sick after the medicine it was discontinued, and three ounces of brandy daily were ordered. On January 23 pericardial friction and cantering rhythm were observed, and there was pain and tenderness in the præcordia. At 9 P.M. the temperature had risen to 103·2°.

Take salicylate of soda, 15 grains every three hours, and a sedative of chloral and morphia at bedtime.

24.—9 A.M. Pulse 112; temperature 102·2°. Slept well; complains of pain below left mamma; urine sp. gr. 1020, albumen a trace.

Increase salicylate to a dose every two hours.

7 P.M.—Temperature 103·8°.

9 P.M.—Pulse 104; temperature 102·2°.

25.—9 A.M. Pulse 112; temperature 100·6°; no pains, but joints feel stiff; was sick after the medicine this morning.

Continue salicylate, and increase brandy to four ounces daily.

9 P.M.—Pulse 112; temperature 101·0°.

26.—9 A.M. Pulse 100; temperature 99·0°. Free from pain; is more comfortable; systolic murmur at apex of heart.

9 P.M.—Temperature 100·8°.

27.—9 A.M. Pulse 96; temperature 98·2°. Continues free from pain.

9 P.M.—Temperature 99·4°.

28.—9 A.M. Pulse 96; temperature 99·2°. Slight deafness; has been sick after medicine.

Take salicylate only every four hours.

29.—9 A.M. Pulse 96; temperature 98·6°. Urine sp. gr. 1030, acid, a good trace of albumen, no blood.

From January 29 to February 12 the patient remained free from pain; the heart sounds underwent no material change; the temperature ranged from 98·0° to 99·0°; the pulse from 64 to 80. The salicylate was continued in doses of 15 grains every four hours until February 12, on which day the patient complained of palpitation and pain in the præcordia, extending down to the left elbow. The medicine was now omitted, and two ounces extra of brandy ordered.

February 13.—9 A.M. Pulse 92; temperature 99·4°. Palpitation and pain down left arm continue; is very fretful.

9 P.M.—Pulse 124; temperature 100·6°.

14.—9 A.M. Pulse 124; temperature 99·4°. Complains of shortness of breath, of pain in the left elbow, and of pain in the abdomen.

9 P.M.—Pulse 148; temperature 102·6°.

Take a sedative of chloral and morphia at bedtime.

15.—9 A.M. Pulse 156; temperature 100·6°. Aspect anxious; is unable to lie upon left side; cardiac rhythm cantering; systolic murmur at apex more pronounced; slight pleuritic friction over a small area of left lung.

Take salicylate of soda 15 grains every two hours. Repeat sedative draught at bedtime.

9 P.M.—Pulse 144; temperature 101·4°.

16.—9 A.M. Pulse 132; temperature 100·2°.

6.30 P.M.—Temperature 103·0°.

9 P.M.—Pulse 130; temperature 102·2°.

17.—9 A.M. Pulse 116; temperature 99·6°. Slept five hours after sedative draught.

9 P.M.—Pulse 128; temperature 101·4°.

18.—9 A.M. Pulse 96; temperature 98·6°. Slept without sedative; is free from pain or perspiration; faint systolic murmur at apex of heart; slight pericardial, and also slight pleuritic, friction still audible.

9 P.M.—Temperature 99·2°.

From February 18 to 24 the patient continued better, slept well, and was free from pain; the temperature never exceeded 99·0°, and was usually quite normal; the pulse ranged from 84 to 90; the salicylate of soda was continued in doses of 15 grains every four hours.

24.—Loud pericardial friction was again heard to-day; and in the evening the temperature rose to 101·0°. These symptoms continued during the two following days; sweating returned, and at 9 P.M. of the 26th the pulse counted 126, and the temperature was 104·0°.

27.—9 A.M. Pulse 136; temperature 101·0°.

Reduce salicylate to a dose every six hours.

9 P.M.—Temperature 101·8°.

28.—9 A.M. Pulse 104; temperature 99·4°.

9 P.M.—Pulse 130; temperature 101·4°.

The patient now again began to improve, and slowly became free from pain and fever; the systolic murmur continued distinctly audible, both at the apex of the heart and at the back of the scapula. Citrate of iron was substituted for the salicylate, and she was discharged apparently convalescent on April 8.

A few days after her discharge she was again admitted with pains in the knees, ankles, and elbows.

April 14.—3 P.M. Pulse 128; temperature 101·8°.

Take 15 grains of salicylate of soda every three hours.

9 P.M.—Pulse 140; temperature 100·6°. Has been in so much pain and so noisy that a dose of chloral and bromide of potassium has been administered.

15.—9 A.M. Pulse 144; temperature 99·6°. Is in less pain; urine sp. gr. 1030, acid, albumen one-fourth, blood, lithates.

Port wine, 4 ounces daily.

9 P.M.—Pulse 132; temperature 99·4°.

16.—9 A.M. Pulse 112; temperature 98·4°. Has been sick after medicine; slight pain in knees, which are still swollen; breathing weak, otherwise normal; heart's maximum impulse in fourth interspace, just within and below nipple; there is a compound murmur, systolic and præsystolic, at the apex; perspiring.

Take salicylate only every six hours.

9 P.M.—Temperature 98·8°.

The temperature now kept normal, and the pulse about 90. On April 17, the salicylate having again produced distressing sickness, it was omitted. The urine was now sp. gr. 1027, and quite free from albumen and blood.

29.—9 A.M. Pulse 108; temperature 99·2°. Perspiring; has slight pain in the left shoulder.

9 P.M.—Temperature 101·6°.

30.—9 A.M. Pulse 116; temperature 100·3°. Sweated much during night; still complains of pain.

Take 10 grains of salicylate of soda every three hours.

9 P.M.—Temperature 101·1°.

May 1.—9 A.M. Pulse 132; temperature 100·4°. Pains as yet unrelieved.

9 P.M.—Temperature 102·3°.

2.—9 A.M. Pulse 120; temperature 100·2°. Has less pain.

9 P.M.—Temperature 101·6°.

3.—Pulse 112; temperature normal all day. Has vomited a coffee-coloured, grumous fluid after the last two doses of medicine.

Take salicylate of soda only every eight hours.

4.—Temperature 97·6°; pulse 96. Has again vomited coffee-coloured fluid.

Omit salicylate.

The temperature kept normal, and the patient seemed to be going on well until May 17. She was very anæmic, and was taking citrate of iron.

17.—9 A.M. Pulse 108; temperature 101·2°.

Take simple effervescing medicine every four hours.

9 P.M.—Temperature 100·4°.

18.—9 A.M. Pulse 130; temperature 99·5°.

9 P.M.—Pulse 120; temperature 101·4°.

19.—9 A.M. Pulse 130; temperature 98·9°. Considerable pain in right shoulder and arm; also in right hand and knee; urine sp. gr. 1026, acid, not albuminous.

9 P.M.—Pulse 136; temperature 101·7°.

20.—9 A.M. Pulse 132; temperature 99·8°. Take 15 grains of salicylate of soda every eight hours.

9 P.M.—Pulse 128; temperature 100·8°, complains of pain in the right mammary region, in which situation some pleuritic friction is heard.

21.—9 A.M. Pulse 120; temperature 100·2°. There is dulness on percussion on the right side of chest from the nipple downwards, and also at the extreme right posterior base. Pain on deep breathing but no friction; voice sounds ægophonic at margin of dulness.

9 P.M.—Pulse 112; temperature 101·2°. Is more comfortable.

22.—Pulse during day about 116; temperature 100·5°.

23.—9 A.M. Pulse 100; temperature 98·8°.

9 P.M.—Pulse 116; temperature 100°.

24.—9 A.M. Pulse 108; temperature 98·5°. Pain in side much easier; perspiring freely.

From this date the temperature remained normal, with the exception of three or four days in the beginning of June, when it rose in the evening to 100·2°, and the patient perspired much.

Discharged well, but with a compound murmur, on June 26.

Was readmitted towards the end of the year with dilated heart and dropsy, of which she died.

Case X.

J. W., æt. 5, was admitted on February 7, 1879. No history of rheumatism in family; previous health good. Has been chilly and had pains in the left foot and knee for several days.

State on admission.—Pulse 138; temperature 103·4°. Skin hot and dry; musical systolic murmur at apex of heart; no præcordial tenderness; heart's apex in normal position.

9 P.M.—Pulse 116; temperature 104·4°.

February 8.—9 A.M. Pulse 140; temperature 103°. Free from pain; expression heavy; systolic murmur over præcordia; urine, sp. gr. 1030, alkaline, not albuminous.

1 P.M.—Temperature 104·2°. Take 5 grains of salicylate of soda every two hours.

9 P.M.—Pulse 108; temperature 103·2°.

9.—Pulse 120; temperature 102°. Slept well; is free from pain.

9 P.M.—Pulse 110; temperature 102·6°.

10.—9 A.M. Pulse 96; temperature 99·4. Has coughed frequently; was restless and talkative during night; urine, sp. gr. 1030; albumen, a trace.

9 P.M.—Pulse 92; temperature 101°.

11.—9 A.M. Pulse 72; temperature 100°. Systolic murmur fainter; impaired percussion resonance and occasional crackling over base of right lung.

9 P.M.—Pulse 96; temperature 99°.

12.—9 A.M. Pulse 80; temperature 98·4°. Pulse irregular and intermittent; no pain; sweating freely.

Take salicylate every four hours; port wine, a dessert-spoonful every three hours.

9 P.M.—Pulse 60 ; temperature 98·6°.

13.—9 A.M. Pulse 96 ; temperature 98·2°.

9 P.M.—Temperature 100·2°.

14.—9 A.M. Pulse 76 ; temperature 99°.

9 P.M.—Temperature 100·8°.

15.—9 A.M. Pulse 80 ; temperature 98·8°. Heart's action very irregular ; systolic murmur, loud and blowing ; chest covered with sudamina.

1 P.M.—Temperature 100·8°. Add 3 grains of salicylate of soda to each dose of medicine ; brandy, 1 ounce daily, instead of wine.

The temperature now fell, and remained about normal until February 20, and the pulse ranged from 64 to 88 ; the urine still continued for some time albuminous, and the cardiac murmur remained ; the breath sounds improved and became quite healthy. On February 18 vomiting ensued, and, as it continued, the salicylate was discontinued on February 19. Next day, February 20, the evening temperature rose to 100·2°, and during the few following days ranged from 103° to 104·2° ; the pulse from 96 to 128. On February 23 she had sore throat ; the fauces were injected, and she suffered from headache and intolerance of light. She was very restless, crying and screaming out without obvious cause. This state passed off, and she was much better, when, towards the end of March, she had an attack of chorea, and subsequently of pericarditis, accompanied by pyrexia, the temperature again ranging from 103° to 104·4°. The salicylate was not again administered, and she was discharged quite well on May 16.

Case XI.

J. M., æt. 14, cabinetmaker, was admitted February 4, 1878. Family and personal history satisfactory. Present illness began about two weeks ago with pains in various parts, and two days ago the ankles became swollen and painful.

State on admission.—Pulse 96 ; temperature 99·6°. Right ankle hot, swollen, red, and painful ; breath and heart sounds normal ; urine normal.

Take 10 grains of salicylate of soda every four hours.

9 P.M.—Pulse 104 ; temperature 101·4°.

February 5.—10 A.M. Pulse 92 ; temperature 99·6°.

10 P.M.—Temperature 99·4°.

6.—10 A.M. Pulse 68; temperature 98·8°. Ankle better; no pain elsewhere.

The temperature and pulse now kept quiet. The salicylate was reduced to a dose every six hours, and discontinued in a day or two. Discharged convalescent on February 16.

Case XII.

F. C., æt. 9, was admitted on September 22, 1879. Father is subject to rheumatism, and a brother died of disease of the heart, the result of rheumatic fever. Patient has not been robust, but has not previously suffered from rheumatism. Present illness commenced a week ago with pains in the knees, followed, a few days later, with pains and swelling in several joints.

State on admission.—Pulse 98; temperature 101·4°. Both ankles, knees, and left wrist are swollen, red, hot, and painful. The heart's apex beats in the fifth interspace outside nipple; rough pericardial friction over præcordia; lungs healthy. Is perspiring freely.

9 P.M.—Pulse 100; temperature 102·4°.

September 23.—9 A.M. Pulse 88; temperature 100·4°. Urine, sp. gr. 1037, acid; turbid, with lithates.

Take 10 grains of salicylate of soda every two hours.

9 P.M.—Temperature 100·6°.

24.—9 A.M. Pulse 80; temperature 90°. Pains generally easier.

9 P.M.—Temperature 97·4°.

25.—9 A.M. Pulse 60; temperature 97·6°. Much better; free from pain; sweating freely; both cardiac sounds rough at the apex.

Take the salicylate every four hours.

9 P.M.—Temperature 97·4°.

26.—Pulse 57; temperature 97·6°. Pains better, but not entirely gone; much less sweating.

Take the salicylate every six hours only.

During the next ten days the temperature ranged from 97·6° to 98·4°, the pulse from 56 to 60. On September 29 the pulse was rather thrilling; and the pains having entirely gone, the salicylate was discontinued. The urine, however, continued of high sp. gr.; the pulse was irregular in rhythm, and the first cardiac sound prolonged and rough.

Discharged convalescent on October 14.

Case XIII.

W. W., æt. 9 years, was admitted October 5, 1878. Father suffers from rheumatism. Previous health good; present attack commenced on September 30 with headache and pains in the limbs, and the day before admission left ankle and knee began to swell.

State on admission.—Pulse 120; temperature 102·4°; urine, sp. gr. 1040, acid. Left ankle and both knees swollen and painful; pericardial friction and cantering rhythm of heart's action.

9 P.M.—Temperature 103·2°.

October 6.—10 A.M. Pulse 120; temperature 101·2°. All the pains are better; both the right ankle and knee are, however, considerably swollen and red; heart sounds very rough.

9 P.M.—Temperature 103·6°.

7.—8 A.M. Pulse 114; temperature 101·4°. Pericardial friction not so loud as yesterday.

Take 10 grains of salicylate of soda every three hours.

11 P.M.—Temperature 99°. Has just taken the fourth dose of salicylate.

8.—8 A.M. Pulse 84; temperature 98·2°. Much improved.

9 P.M.—Temperature 97·2°.

The temperature now kept normal, or subnormal, and the pulse ranged from 72 to 90. On October 12, the first sound of the heart being almost inaudible at the apex, the salicylate was omitted, and 1 ounce of brandy was ordered to be given in small doses at stated intervals. The patient was discharged quite well on October 29.

Case XIV.

L. P., æt. 16 years, servant, was admitted October 22, 1878. Has already had three attacks of rheumatism in the knees and ankles; suffers from cough in winter; present illness commenced on the 18th inst. with pain in the knees and ankles; had shivering the day before admission.

State on admission.—Pulse 138; temperature 101·8°. Knees and ankles swollen and very painful; loud pericardial friction over the præcordia.

9 P.M.—Pulse 138; temperature 101·6°.

October 23.—9 A.M. Pulse 116; temperature 100°. Pains rather better; urine, sp. gr. 1032, acid; heart's impulse rather heaving; loud friction all over præcordia; systolic murmur at apex, also audible at back of scapula.

9 P.M.—Temperature 101·6°.

24.—9 A.M. Pulse 116; temperature 99·8°.

9 P.M.—Temperature 101·4°.

25.—9 A.M. Pulse 100; temperature 100·6°. Cardiac impulse less forcible; area of dulness slightly increased; friction not so audible; systolic murmur continues.

Take 15 grains of salicylate of soda every three hours; brandy, 2 ounces.

9.30 P.M.—Temperature 99·6°. Has had only two doses of salicylate.

26.—9 A.M. Pulse 95; temperature 98·4°. Sweating slightly; has been sick after medicine.

9 P.M.—Pulse 100; temperature 99·4°. Has vomited after the salicylate; vomit contains blood.

27.—10 A.M. Pulse 92; temperature 98·4. Complains of deafness and giddiness; has again been sick after medicine.

Discontinue salicylate of soda.

The temperature now continued at or below the normal standard; the pulse ranged from 72 to 96; there was no return of pain in the joints, but the cardiac murmur did not entirely disappear. On October 28, after discontinuing the salicylate, the urine, sp. gr. 1036, contained a notable proportion of albumen.

Discharged convalescent on November 11.

Case XV.

W. E., æt. 15 years, errand boy, was admitted November 2, 1877. No history of rheumatism either in patient or family. Present illness began with pain in the chest and limbs, shivering and general malaise a few days ago.

State on admission.—Pulse 120; temperature 101·4°. Complains of pains in the knees and ankles; left ankle swollen, red, hot, and tender; breath sounds normal; heart's action irregular; a thrill at apex; friction at base; urine normal.

10 P.M.—Pulse 112; temperature 102·2°. Sweating freely.

November 3.—10 A.M. Pulse 108; temperature 100·6°. Passed a restless night; ankles less painful; heart's action irregular; cantering rhythm.

10 P.M.—Pulse 104; temperature 101°. Pulse intermitting.

4.—10 A.M. Pulse 92; temperature 100·6°.

Take 15 grains of salicylate of soda every four hours.

6 P.M.—Temperature 102·4°.

10 P.M.—Pulse 96; temperature 100·2°.

5.—10 A.M. Pulse 100; temperature 99·6°. Complains of pain in both feet; faint systolic murmur at apex of heart.

6 P.M.—Temperature 101°.

10 P.M.—Temperature 99·2°.

6.—The temperature, normal in the morning, rose at 7 P.M. to 100·4°, but fell to 99·2° at 10 P.M. It now remained, for the most part, subnormal for several days, falling on two occasions as low as 96·2° and 96·6°. The pulse ranged from 60 to 86. On November 6 gastric irritability and injected tongue supervened, and the salicylate was discontinued. The pains altogether disappeared after November 8, but the patient still continued to sweat, and the first cardiac sound remained long, rough, and murmurish.

Discharged convalescent on November 17.

Case XVI.

G. W., æt. 30, policeman, admitted December 12, 1877. Had an attack of rheumatic fever two years ago; had measles six weeks since, and after resuming duty was exposed to wet; four days since began to suffer from pains in the knees and ankles, and afterwards in the elbows and shoulders.

State on admission.—Pulse 104; temperature 101·3°. Face flushed; skin moist; right wrist red, swollen, hot, and tender; both shoulders very painful and tender; faint systolic murmur at apex of heart.

9 P.M.—Pulse 96; temperature 100°.

December 13.—10 A.M. Pulse 120; temperature 100·2°. Urine, sp. gr. 1030, normal; complains of pain across the loins.

Take 15 grains of salicylate of soda every four hours.

10 P.M.—Temperature 103°. Perspiring.

14.—10 A.M. Pulse 100; temperature 104·1°. Vomited during night; complains of soreness of throat; fauces injected.

10 P.M.—Pulse 112; temperature 101·4°. Has again vomited.

15.—10 A.M. Pulse 104; temperature 101·4°. Has passed a restless night; perspired very copiously; slight systolic murmur at apex of heart; cantering rhythm.

10 P.M.—Pulse 112; temperature 99·2°.

16.—10 A.M. Pulse 88; temperature 99·6°. Has vomited several times this morning; is deaf.

10 P.M.—Pulse 88; temperature 92·2°. Urine, sp. gr. 1030, alkaline.

The temperature now remained normal or subnormal; the pulse ranged from 64 to 88. On the 18th there was a pericardial rub as well as a systolic murmur. The patient still sweated, and the specific gravity of the urine continued high until December 23. There was occasional vomiting, especially after the medicine. On December 20, the patient being quite free from pain, the salicylate was discontinued. Discharged well on January 4.

Case XVII.

A. H., æt. 35, housewife, admitted November 23, 1879. Had rheumatic fever at the age of 16 years; subsequent health good; caught cold ten days ago, and awoke with pains in the ankles, afterwards spreading to other joints.

State on admission.—Pulse 116; temperature 102·2°. Has pains in most joints; heart's impulse forcible; systolic murmur at apex; second sound reduplicate.

9 P.M.—Pulse 120; temperature 103·2°.

Take 15 grains of salicylate of soda every four hours.

November 24.—9 A.M. Pulse 96; temperature 100·2°. Slept well; pains continue.

9 P.M.—Temperature 100·2°. Complains of pains in shoulders.

25.—9 A.M. Pulse 76; temperature 98·4°. Has pain only in right shoulder and hand.

9 P.M.—Pulse 90; temperature 98·5°.

From this time the temperature kept at or below the normal, with the exception of one or two evenings, when it reached 99·4°; the pulse ranged from 90 to 98. The pains subsided slowly, and only finally ceased about December 15. On November 27 the first cardiac sound was feeble, and the tongue dry; next day the patient complained of vertigo and noises in the ears; two ounces of brandy were ordered, and the salicylate was omitted. A thrill was felt at the heart on December 3, and a præsystolic murmur became developed,

which still remained when she was discharged, on December 24.

Case XVIII.

H. L., æt. 16, errand boy, was admitted June 13, 1879. Previous health good; mother is subject to rheumatism. Got wet at beginning of last week, and a day or two afterwards experienced slight pains in the ankle-joints, which soon became swollen; pain in other joints soon appeared, and he became disabled.

State on admission.—Pulse 100; temperature 100·8°. Both knees and ankles swollen, red, and painful; skin hot and dry; heart sounds clean.

Take 15 grains of salicylate of soda every four hours.

9 P.M.—Pulse 108; temperature 102·3°. Skin hot and dry; complains of severe pain in the left knee, which is much swollen.

June 14.—Pulse 80; temperature 99°. Feels much better; no pain in left knee this morning.

9 P.M.—Pulse 72; temperature 99·6°.

15.—9 A.M. Pulse 72; temperature 98°.

9 P.M.—Temperature 98·3.

16.—9 A.M. Pulse 72; temperature 98·4°. Free from pain; joints much less swollen; the first cardiac sound is feeble; no murmur.

Take the salicylate only every six hours.

The temperature now ranged from 97·4° to 98·8°, and the pulse from 68 to 88; there was no return of pain, and the swelling soon subsided. The medicine was reduced to three times a day on June 17, and discontinued a few days later. Discharged convalescent on July 15.

Case XIX.

L. C., æt. 14 years, was admitted January 22, 1878. A brother and a sister suffer from rheumatism; had rheumatism himself two years ago, but otherwise previous health good; present illness commenced on 20th inst. with pains in the knees and shivering.

State on admission.—Pulse 124; temperature 101·4. Face flushed; ankles and knees swollen, red, hot, and painful; skin hot and dry; considerable hyperæsthesia of

general surface; is confused in manner and slightly incoherent; systolic murmur at heart.

Take 10 grains of salicylate of soda every three hours.

10 P.M.—Pulse 108; temperature 102·6°. Perspiring freely.

January 23.—10 A.M. Pulse 108; temperature 100·8°. Slept well, but was wandering and talkative at times; knees considerably swollen, red, and tender; ankles less so than yesterday; well-marked pericardial friction over base of heart; urine normal.

10 P.M.—Pulse 88; temperature 99·4°.

24.—10 A.M. Pulse 84; temperature 98·8°. Free from pain, and generally better; pericardial friction less marked.

10 A.M.—Pulse 70; temperature 98·8°.

25.—10 A.M. Pulse 64; temperature 97·6°.

The temperature and pulse now kept at or about the normal standard, and there was no return of pain. The salicylate was discontinued on January 28. Discharged convalescent on February 26.

Case XX.

C. C., æt. 10 years, was admitted on March 18, 1878. Previous health good; no history of rheumatism in family. Illness commenced with pains in the hips and ankles 17 days before admission.

State on admission.—Pulse 128; temperature 101·2°. Pains in ankles, feet, and wrists; wrists red, hot, and tender; other joints also tender, but not swollen; rough systolic murmur at base of heart.

9 P.M.—Pulse 140; temperature 101·6°. Sweating freely.

March 19.—9 A.M.—Pulse 128; temperature 100·2°. Urine, sp. gr. 1035, acid, sweating; pericardial friction over base of heart.

Take 10 grains of salicylate of soda every three hours.

9 P.M.—Pulse 90; temperature 100·5°. Sweating freely.

20.—10 A.M. Pulse 96; temperature 98·8°. Skin moist; still has pains in the wrists. Vomited after medicine this morning.

9 P.M.—Temperature 99·4°.

21.—10 A.M. Pulse 96; temperature 99·2. Pericardial friction still audible; swelling and pains of joints much subsided. Vomited after medicine this morning.

Brandy, 1 ounce daily.

9 P.M.—Temperature 98·3°.

The temperature now ranged from 99° to 98°, the pulse from 80 to 96. Sweating continued for many days, but there was no return of pains. Vomiting recurred occasionally until the salicylate was discontinued. On March 26 it was reduced to a dose every six hours; and on March 28, the heart's impulse being very feeble and the first sound very faint, it was entirely omitted. Discharged convalescent on April 26.

Case XXI.

C. G., æt. 17 years, servant, was admitted March 14, 1878. Mother has had rheumatic fever; patient's previous health good. Present illness commenced on the 10th inst. with shivering, followed by pains in the elbows and knees.

State on admission.—Pulse124; temperature 100·0°. Right knee and elbow hot, swollen, and very tender; face flushed, skin moist; faint systolic murmur at apex of heart.

9 P.M.—Pulse 124; temperature 101·4°. Sweating freely.

March 15.—10 A.M. Pulse 118; temperature 100°. Cantering rhythm of heart; right knee much swollen, hot, and painful.

9 P.M.—Pulse 128; temperature 101°.

16.—10 A.M. Pulse 100; temperature 99·8°. Faint thrill at heart; systolic murmur continues.

Take 15 grains of salicylate of soda every two hours.

9 P.M.—Pulse 116; temperature 103·2°. Knee still very painful; sweating profusely.

17.—10 A.M. Pulse 100; temperature 100·6°. Knee less painful.

9 P.M.—Temperature 101·6°.

18.—10 A.M.—Pulse 108; temperature 100·6°. Urine, sp. gr. 1030, alkaline; right knee still much swollen.

9 P.M.—Pulse 112; temperature 100·8°.

19.—10 A.M. Pulse 88; temperature 99·6°. Free from pain; systolic murmur at apex of heart.

20.—10 A.M. Pulse 88; temperature 98°. Sweating profusely; free from pain.

Between March 20 and April 3 the temperature ranged from 97·6° to 98·6°, the pulse from 84 to 60. The systolic murmur continued audible until the patient left the hospital. On March 21, the patient complaining of intense headache, the salicylate was reduced to a dose every six hours; and on March 27, as the headache continued, the pulse was very

irregular, and the first sound of the heart almost inaudible, and the patient complained of noises in the ears, the medicine was entirely discontinued. Discharged convalescent on April 24.

Case XXII.

F. Y., æt. 18 years, footman, was admitted April 14, 1878. Father gouty, mother died of disease of the heart. Patient's previous health always excellent. Present illness commenced on 13th inst. with pains in the knees.

State on admission.—Pulse 96; temperature 99·8°. Both knees and ankles swollen, hot, and tender; skin moist; both cardiac sounds a little rough.

April 15.—9 A.M. Pulse 96; temperature 99·2°. Ankles rather less swollen and painful, knees still very painful.

9 P.M.—Temperature 99·4°.

16.—9 A.M. Pulse 96; temperature 98·4°. Almost free from pain; skin still moist.

9 P.M.—Pulse 92; temperature 100·4°. Both ankles again swollen and painful.

17.—9 A.M. Pulse 90; temperature 98·2°. Right ankle still swollen and painful, left much better; systolic murmur at apex of heart; both sounds rough at the base.

9 P.M.—Temperature 100·5°.

18.—9 A.M. Pulse 90; temperature 99·6°. Free from pain.

9 P.M.—Temperature 100°. Still perspiring.

19.—9 A.M. Pulse 92; temperature 99·6°. Ankle and right knee swollen; systolic murmur at heart fainter; second sound very rough at the base.

Take 15 grains of salicylate of soda every four hours.

9 P.M.—Temperature 101·4°.

20.—9 A.M. Pulse 96; temperature 98·6°. No pain in the joints.

9 P.M.—Temperature 99°.

The temperature now kept down to almost the normal standard, having only twice risen above 99°. The pains also entirely ceased after April 22, but the sweating continued for some days. The salicylate was reduced to a dose every eight hours on April 23, and discontinued on the 30th. A small trace of albumen was found in the urine on May 6. The cardiac murmur became fainter, but had not gone when the patient was discharged, on May 10.

Case XXIII.

L. F., æt. 14, was admitted December 4, 1877; had rheumatic fever at 11 years of age. Present illness commenced on December 2 with shivering, pain in the back, and pains and swelling of knees and feet.

State on admission.—Pulse 104; temperature 101·8°. Skin hot and dry; ankles and elbows red, hot, swollen, and very tender; systolic murmur at apex of heart, most intense just within the nipple, and not audible behind.

December 5.—9 A.M. Pulse 105; temperature 99·4°. Pains as yesterday.

10 P.M.—Pulse 130; temperature 102·1°. Perspiring freely.

6.—9 A.M. Pulse 112; temperature 101·4°. Complains of pain in the lower part of sternum and also in the left knee and right elbow; urine, sp. gr. 1035, acid; pericardial friction at base of heart.

Take 15 grains of salicylate of soda every two hours.

10 P.M.—Temperature 102·4°. Sweating copiously.

7.—10 A.M. Pulse 100; temperature 100·4°. Much less pain; joints less tender and swollen; complains of nausea after medicine; still pericardial friction and a systolic murmur at apex of heart.

10 P.M.—Pulse 86; temperature 98·8°. Has vomited after last two doses of medicine.

8.—10 A.M. Pulse 100; temperature 98·6. Has again been sick after medicine. Free from pain; still sweating; deaf; pulse feeble; complains of swimming in the head.

Brandy, 1 ounce; omit salicylate, of which she has taken 265 grains.

10 P.M.—Temperature 98°.

The temperature now remained normal or subnormal, and the pulse quiet; there was no return of pains, but the sweating continued for some days. Discharged convalescent on January 3, 1878.

Case XXIV.

J. L., æt. 17, footman, was admitted on February 27, 1879. Previous health good; mother subject to rheumatism. Present illness began three weeks ago, but subsided, and he resumed his duty. He then got wet on the 25th, which brought on a recurrence of pains in the legs.

State on admission.—Pulse 96; temperature 102·4°. Pains in the knees, ankles, and right wrist. The affected joints are hot, swollen, and tender; sweating freely. Heart sounds clean.

February 28.—9 A.M. Pulse 104; temperature 102·4°.

Take salicylate of soda, 15 grains, every two hours.

9 P.M.—Temperature 102·7°.

March 1.—9 A.M. Pulse 84; temperature 98·4°. Pains much better; is rather deaf.

9 P.M.—Pulse 80; temperature 99°.

2.—9 A.M. Pulse 88; temperature 97·6°. Free from pain; complains of giddiness; wandered during night; sweating freely.

Take salicylate every three hours.

9 P.M.—Pulse 88; temperature 98·6°. Sweating; wanders.

3.—9 A.M. Pulse 84; temperature 98°. Free from pain; still deaf.

Brandy, 1 oz. daily; take medicine only every six hours.

9 P.M.—Pulse 76; temperature 98·4°. Sweating.

4.—9 A.M. Pulse 76; temperature 98·5°. Deafness continues; second sound of heart reduplicate; slight epistaxis.

Omit salicylate.

The day after the salicylate was discontinued the temperature rose to 100°, but soon fell again to the normal standard. The pulse ranged from 52 to 80; there was no return of pains, and the patient was discharged well on March 25.

Case XXV.

T. A., æt. 24, warehouseman, was admitted December 13. 1877. Previous health good. Mother has suffered from rheumatic fever; had been laid up at home for six weeks with rheumatic fever before admission.

State on admission.—Pulse 112; temperature 100·4°. Right knee swollen, red, and painful. Pericardial friction; systolic murmur at apex of heart, also audible behind.

9 P.M.—Pulse 112; temperature 102·4°. Sweating copiously.

Dec. 14.—10 A.M. Pulse 116; temperature 102·6°. Right wrist and hand, right knee and both ankles swollen, hot, and painful; sweating copiously. Heart's action irregular, faint thrill; systolic murmur and prefix at apex of heart; pericardial friction not so distinct.

Take salicylate of soda, 15 grains, every four hours.

9 P.M.—Pulse 108; temperature 101°. Restless; joints remain very painful.

15.—9 A.M. Pulse 104; temperature 100·8°. Still sweating; pains in joints diminished; heart's condition unchanged.

9 P.M.—Temperature 99·8°.

Take salicylate only every six hours.

From this date the temperature fell, and was always normal after the evening of the 16th; on the 17th the urine had a sp. gr. of 1038, and continued high for several days. On the 18th there was still pericardial friction. The salicylate was discontinued on December 23, and the patient was discharged on January 4, but with a systolic murmur.

Case XXVI.

J. W., æt. 14, was admitted on March 23, 1878. Previous health good. No history of rheumatism in family. Present illness began with pains in the legs on March 15; next day the knees became swollen and painful, and she experienced uneasiness in the præcordia.

State on admission.—Pulse 116; temperature 103·4°. Profuse sour sweating; both knees and left ankle swollen, red, hot, and very painful. Pericardial friction over praecordia; loud systolic murmur at apex of heart.

9 P.M.—Temperature, 102·5°.

March 24.—10 A.M. Pulse 106; temperature 101°. Right elbow and arm very painful.

10 P.M.—Temperature 100°.

25.—10 A.M. Pulse 100; temperature 98·2°. Knees better; right arm still painful.

10 P.M.—Temperature 98·6°.

26.—10 A.M. Pulse 90; temperature 98°. Free from pain.

10 P.M.—Pulse 108; temperature 101·0°. Perspiring very freely; complains of much pain in both elbows and wrist.

27.—10 A.M. Pulse 84; temperature 98·2°.

Take 15 grains of salicylate of soda every four hours.

10 P.M.—Temperature 99·8°. Skin moist; free from pain. From this time the temperature kept normal or sub-normal, and the pulse quiet. The pains did not recur, but a systolic murmur was still audible at the heart, when the patient was discharged, on April 28.

Case XXVII.

M. H., æt. 20, nursemaid, was admitted October 10, 1877. Previous health good, but a brother had suffered from rheumatic fever. Illness commenced on October 7 with pain in the back. Pains subsequently developed in knees and feet.

State on admission.—Pulse 124; temperature 102·3°. Urine, sp. gr. 1030, alkaline. Face flushed; knees and ankles swollen, red, and painful. Heart's impulse feeble, and accompanied by a thrill. Cantering rhythm. A musical systolic murmur at apex; slight friction inside nipple line.

9 P.M.—Pulse 124; temperature 102°.

October 11.—9 A.M. Pulse 128; temperature 101·6°. Pains not better. Condition of heart unchanged.

10 P.M.—Pulse 124; temperature 101·8°.

12.—9 A.M. Pulse 124; temperature 101·8°. Pains are less severe, and swelling of joints diminished.

2 P.M.—Temperature 102·2°. Sweating copiously; friction at heart still continues.

Take 30 grains of salicylate of soda every two hours.

10 P.M.—Pulse 128; temperature 100·8°. Sweating profusely; very little pain.

13.—Noon. Pulse 104; temperature 99·6°. A little pain in knees only; sweating; murmur at apex of heart; pericardial friction at mid-sternum. Slight deafness; sick after each dose of medicine.

Take 15 grains of salicylate of soda every three hours, and 1 drachm of brandy after each dose.

9 P.M.—Pulse 104; temperature 100°. Sweating; no pain. Still occasionally sick after medicine.

14.—9 A.M. Pulse 90, of good volume; temperature 99·2°. Sweating; no pain; faint friction and murmur at apex of heart.

10 P.M.—Pulse 96; temperature 101°. Perspiring; is rather deaf; no pain; sick after the last dose of medicine.

The temperature now ranged from 99·8° to 97·6°, and the pulse from 76 to 90. There was no return of pain. Perspiration continued for some days and the deafness increased; there was no return of sickness. On October 15 a small trace of albumen appeared in the urine, but was transient. On October 17 the deafness still continuing, and the patient complaining of noise in the ears, the salicylate was discontinued. The patient gradually improved in general health, but a faint systolic murmur was still audible when she was discharged, on November 9.

Case XXVIII.

A. M., æt. 22, was admitted November 28, 1876. Previous health good; no history of rheumatism in family; present illness commenced with a severe cold, followed after a few days by pains in the arms and legs.

State on admission.—Pulse 104; temperature 100·7°. Left wrist and knee and right instep very painful, but not swollen; pericardial friction at the left border of the sternum; perspiring copiously.

9 P.M.—Pulse 109; temperature 103°.

Nov. 29.—9 A.M. Pulse 104; temperature 100·7°. Pain and tenderness in the right shoulder; urine, sp. gr. 1030, normal, but loaded with lithates.

Take 15 grains of salicylate of soda every two hours.

9 P.M.—Pulse 88; temperature 101·4°.

30.—9 A.M. Pulse 76; temperature 100°. Pains diminished.

9 P.M.—Pulse 84; temperature 98·8°.

December 1.—9 A.M. Pulse 84; temperature 98·3°. Sweating profusely; pains less; pericardial friction continues, but is less marked.

9 P.M.—Pulse 92; temperature 98·2°. Sour sweating continues.

2.—9 A.M. Pulse 96; temperature 98·6°. Free from pain; still sweating; complains of giddiness and of feeling sick after medicine.

Omit salicylate.

The temperature now ranged from 99·8° to 97·9°, but rarely exceeded 98·6°; the pulse from 104 to 56. The pains gradually subsided, and the patient was discharged on December 16, when there was still a faint systolic murmur at the apex of the heart.

Case XXIX.

A. C., æt. 26, nurse, admitted on March 18, 1879. Had an attack of rheumatism two years ago; no history of rheumatism in family; illness commenced two days before being warded.

State on admission.—Pulse 92; temperature 100·4°. Sweating freely; complains of pains in the knees and ankles, but these joints are neither swollen nor tender; first sound

of heart prolonged and rough; impulse of heart rather forcible.

9 P.M.—Pulse 108; temperature 101°. Sweating freely.

Take 30 grains of salicylate of soda every eight hours.

March 19.—9 A.M. Pulse 100; temperature 100·5°.

Take salicylate every four hours.

9 P.M.—Pulse 92; temperature 99·8°.

20.—9 A.M. Pulse 96; temperature 99·6°. Pains diminished; less sweating.

9 P.M.—Temperature 99·6°. Restless.

21.—9 A.M. Pulse 88; temperature 99°. Is free from pain.

9 P.M.—Pulse 84; temperature 99·4°.

22.—9 A.M. Pulse 76; temperature, 99·6°. Perspires much; no pain.

9 P.M.—Temperature 99°.

23.—9 A.M. Pulse, 91; temperature 99·2°.

9 P.M.—Temperature 100·3°.

24.—3 A.M. Pulse 96; temperature 100°. Slight pain in right wrist and shoulder; perspires less.

Take salicylate every three hours.

9 P.M.—Temperature 100·8°.

25.—9 A.M. Pulse 108; temperature 100·6°; urine, sp. gr. 1035, acid.

9 P.M.—Temperature 101·6°.

26.—9 A.M. Pulse 100; temperature 100·2°. Complains of deafness and of uneasy sensations in the head.

9 P.M.—Temperature 100°.

27.—9 A.M. Pulse 80; temperature 99·3°.

Omit salicylate; take two grains of quinine every four hours.

The temperature now fell, and only twice again reached 99·8° for a few hours; the pains disappeared, and the patient was discharged convalescent on April 9.

Case XXX.

F. D., æt. 14 years, van-boy, admitted April 22, 1878. Illness commenced a few days since with chilliness and pains in the arms and shoulders.

State on admission.—Pulse 118; temperature 103·5°. Cheeks flushed; skin moist; complains of pains in back and limbs; has slight sore throat; urine, sp. gr. 1013, contains a trace of albumen; heart healthy.

10 P.M.—Pulse 108; temperature 102·5°. Skin moist.

April 23.—10 A.M. Pulse 96; temperature 102·2°. Pains chiefly in muscles of back and neck.

Take 10 grains of salicylate of soda every four hours.

9 P.M.—Pulse 100; temperature 101·4°.

24.—10 A.M. Pulse 98; temperature 102°. Sweating profusely; pains much better; faint systolic murmur at apex of heart; urine, sp. gr. 1020, free from albumen.

10 P.M.—Pulse 116; temperature 104·4°. Face flushed; skin hot and dry; patient wandering.

25.—10 A.M. Pulse 72; temperature 99·6°. Pulse rather irregular; sweating freely; was delirious during night.

Take salicylate every two hours, brandy 1 ounce daily.

9 P.M.—Temperature 100°.

26.—9 A.M. Pulse 84; temperature 99·2°. Perspiring.

Take salicylate only every three hours.

9 P.M.—Temperature 98·4°.

27.—9 A.M.—Pulse 78; temperature 100°. Is very deaf; complains of giddiness on being raised up; sweating freely.

9 P.M.—Temperature 98·5°.

From this date the temperature only once exceeded 99·2°, and was commonly normal or subnormal. The pulse ranged from 48 to 76, but became more irregular and feeble, rendering it necessary to give brandy more freely. The sweating continued for some days, but the pains ceased on April 30. The systolic murmur was still audible on May 17. The salicylate was gradually discontinued, and the patient was discharged convalescent on May 28.

Case XXXI.

J. B., æt. 45, carman, was admitted October 17, 1877. Mother and three brothers have suffered from rheumatic fever; has also himself had that disease twice; is a free liver; present illness commenced on October 15 with pains and swelling of the knees.

State on admission.—Pulse 108; temperature 101·4°; Urine, sp. gr. 1011, acid, albumen one-twelfth. Expression anxious; knees, ankles, and left wrist swollen, tender, hot, and painful; some of the finger-joints are also swollen and painful; lungs emphysematous; heart's impulse feeble; sounds clean; arteries tortuous.

10 P.M.—Temperature 101·2°.

18.—10 A.M. Pulse 104; temperature 100·0°. Pains easier.

Has pleurisy on left side; rhonchus audible over front of chest.

10 P.M.—Pulse 112; temperature 100·8°.

19.—10 A.M. Pulse 108; temperature 99·8°. Much pain in right arm.

9 P.M.—Pulse 108; temperature 101·8°.

20.—10 A.M. Pulse 100; temperature 100·4°. Urine still albuminous. Pains easier.

Take 15 grains of salicylate of soda every three hours.

10 P.M.—Pulse 92; temperature 100·4°. Sweating profusely.

21.—10 A.M. Pulse 94; temperature 99·4°. Right hand still very painful. Dulness on percussion over back of thorax; tubular breathing; effusion in lower part of left pleura.

10 P.M.—Pulse 84; temperature 101·6°.

22.—10 A.M. Pulse 96; temperature 99·0°. Profuse sweating; extremely deaf, says that he feels wandering and hears noises like a barrel organ and a steam hammer; complains of extreme frontal headache.

Brandy three ounces daily.

10 P.M.—Pulse 90; temperature 99·0°.

23.—10 A.M. Pulse 92; temperature 99·3°. Feels much better; headache less; has noises in ears; a little pain on movement only.

Take salicylate only every six hours.

10 P.M.—Pulse 88; temperature 99·0°.

24.—10 A.M. Pulse 90; temperature 98·2°. Pain in right wrist, elbow, and knee; condition of lung improving. Urine no longer albuminous.

Omit salicylate.

The pains continued, and the temperature rose on October 26 to 100·6°. Sulphate of quinine was now prescribed. The pains subsided slowly, but the lung mischief cleared up rapidly. Discharged convalescent, with a slight systolic murmur at the apex of the heart, on December 4.

Case XXXII.

W. D., æt. 19, clerk, admitted July 19, 1877. Previous health good; no history of rheumatism in family. Present illness commenced with chilliness on July 14, followed next day by pains in the feet and hands.

State on admission.—Pulse 128; temperature 103·6°.

Skin hot and moist. Ankles, feet, and right knee swollen, hot, red, and painful. Heart sounds normal.

10 P.M.—Pulse 108; temperature 104·2°. Sweating freely.

July 20.—9 A.M. Pulse 126; temperature 102·8°. Slept after a dose of chloral and morphia. Sweated very profusely during the night; loud friction over præcordia.

Take 30 grains of salicylate of soda every two hours.

8. P.M.—Pulse 132; temperature 102·6°; respirations 50. Pulse very compressible; is rather deaf; face pale; complains of breathing being short and difficult.

Discontinue salicylate, of which two and a half drachms have been taken; ordered two drachms of brandy every two hours, subsequently increased to half an ounce.

21.—10 A.M. Pulse 180; temperature 102·8°; respirations 60. Pulse very compressible. Sweating; has been sick; continues very deaf. Heart sounds feeble, first scarcely audible; pericardial friction and soft blowing systolic murmur at apex of heart. Pains in right elbow, wrist, hand, and knee on movement only.

The salicylate was not resumed. The temperature fell in the course of a few days, and the pains, pericarditis, and sour sweating subsided. Discharged quite well on September 7.

Case XXXIII.

S. J. P., æt. 30, housewife, admitted August 26, 1879. Had rheumatic fever at the age of 20 years, and has suffered since from winter cough. Present illness commenced about six days ago with pains in the knees, hips, and left hand.

State on admission.—Pulse 88; temperature 100·3°. Severe pain in both knees, ankles, and left hand. A soft systolic murmur at apex of heart traceable into axilla. Skin moist.

9 P.M.—Pulse 96; temperature 101·4°.

Take 15 grains of salicylate of soda every four hours.

August 28.—9 A.M. Pulse 100; temperature 100·0°. Pain in the left hand very severe. Pericardial friction.

9 P.M.—Temperature 101·0°.

29.—9 A.M. Pulse 100; temperature 100·0°. Pain in right shoulder and wrist; sweating profusely.

9 P.M.—Temperature 100·0°. Complains of deafness.

30.—9 A.M. Pulse 108; temperature 101·6°. Deafness.

Take salicylate only every six hours.

9 P.M.—Temperature 100·4°.

31.—9 A.M. Pulse 88; temperature 100·2°.

9 P.M.—Temperature 99·4°.

September 1.—9 A.M. Pulse 88; temperature 99·3°. Pericardial friction well marked; less deafness.

9 P.M.—Pulse 88; temperature 100·4°.

2 to 26.—The temperature reached 100·8° on the evening of September 3, but, with this exception, ranged from 96·8° to 99·4°, and was after the 3rd mostly subnormal. The pulse ranged during the same period from 60 to 68. Pericardial friction continued throughout this time, and on September 4 some dulness on percussion and crepitation was found on the left side of thorax.

The salicylate was reduced to a dose three times a day on September 6, and discontinued on the 9th.

On September 26, when considered as convalescent, there was return of pains in several joints and of pericardial friction. The temperature and pulse rose with this relapse, but not so high as previously. On October 2, 15 grains of salicylate of soda were ordered to be taken every three hours, and two ounces of brandy to be given daily, in small doses, at regular intervals. Deafness soon followed the use of the medicine, and on October 5 the patient was wandering, and saw persons at her bedside. The salicylate was now reduced to a dose every six hours. The sweating continued, and the pains did not cease until after October 10. The medicine was now reduced to a dose twice a day, and entirely omitted on the 14th. Patient was discharged convalescent on October 31, but a systolic murmur was still audible.

Case XXXIV.

D. H. P., æt. 21, draper's assistant, admitted April 27, 1877. Has had three previous attacks of rheumatic fever. Present illness commenced a few days ago, with pains in the feet, knees, and shoulders, and much sweating.

State on admission.—Pulse 108; temperature 101·2°. Sour sweating; pains in both shoulders, right elbow and wrist, and left knee. Heart sounds clean.

For five days after admission the temperature ranged from 101·4° to 103·4°., and the pulse from 108 to 116. The pains wandered from joint to joint, and pericarditis became developed. During this time quinine was administered in large doses.

May 3.—9 A.M. Pulse 96; temperature 102·0°. Has severe pain in both hands; sweating freely; impaired resonance on percussion, and abundant crepitation over posterior bases of both lungs.

Take 30 grains of salicylate of soda every two hours.

9 P.M.—Pulse 116; temperature 99·0°.

4.—9 A.M. Pulse 118; temperature 97·8°. Perspiring profusely; pains in both wrists and elbows.

9 P.M.—Pulse 118; temperature 97·3°. Has no pain; very deaf; sweating freely.

Omit salicylate.

The temperature kept normal or subnormal, and the pulse about 90, until May 7; trunk covered with sudamina; free from pain. On May 7 the temperature rose to 99·6°, and a faint systolic murmur was heard, with reduplication of the second sound of the heart. On May 9 there was pain in the left knee, and pericardial friction was audible.

9.—9 P.M. Pulse 112; temperature 101·3°. Pain in right ankle and left knee; sweating profusely.

10.—9 A.M. Pulse 112; temperature 101·6°. Sour sweating. Pains in right ankle, left knee, and both elbows; pericardial friction.

Take 30 grains of salicylate of soda every two hours; brandy four ounces daily.

11.—9 A.M. Pulse 120; temperature 101·4°. Respirations 28; left elbow swollen, red, hot, and painful; other joints free.

9 P.M.—Pulse 116; temperature 100·4.

12.—9 A.M. Pulse 100; temperature 98·0°. Sweating very freely. Very slight pain in left elbow. Deafness has returned; tongue tremulous.

The temperature now remained normal, and the patient appearing to improve, the salicylate was omitted on May 16, when he was extremely deaf. On May 20 the temperature rose to 99·4°. Profuse sweating returned, and he complained of pains in the chest. On May 24, at 10 P.M., pulse 112; temperature 102·5°. Perspiring copiously; pain in hips and chest.

Take 15 grains of salicylate of soda every two hours.

25.—9 A.M. Pulse 84; temperature 100·4°. The temperature now again fell rapidly, but free sweating continued, and deafness returned.

Discharged well on June 12.

Case XXXV.

W. C., æt. 16, printer's boy, admitted May 15, 1877.

Previous health good. Present illness commenced two days ago with pains in legs and ankles.

State on admission.—Pulse 108; temperature 102·0°. Both knees, ankles, and elbows more or less swollen, hot and tender; heart's impulse diffused and attended by a thrill; faint pericardial rub at apex; sibilant râles over front of lungs.

9 P.M.—Pulse 108; temperature 104·2°.

16.—10.30 A.M. Pulse 110; temperature 104·0°. Pains much less severe, but still present in same joints as yesterday.

Take 15 grains of salicylate of soda every two hours.

9 P.M.—Pulse 88; temperature 100·8°. Profuse sour sweating.

17.—9.45 A.M. Pulse 84; temperature 97·8°. Pains have much diminished, but there still is much pain on movement of the affected joints. There is also to-day some redness about the right knee, wrist, and ankle; sour sweating. Heart sounds normal; pulse rather feeble.

9 P.M.—Pulse 88; temperature 97·4°. Still sweating; has very little pain. Is rather deaf and has been sick this evening.

18.—8 A.M. Pulse 80; temperature 97·8°. Still sweats; increased deafness; has been repeatedly sick after medicine. Omit salicylate of soda.

9 P.M.—Temperature 98·0°.

19.—8.30 A.M. Pulse 74; temperature 98·2°. Scarcely any pain in joints, but they still remain swollen; perspiring gently; pericardial rub still audible.

9 P.M.—Temperature 97·5°.

The temperature now remained normal until June 1; the pulse became weak and irregular, and ranged from 44 to 60. There were no pains, but the cardiac murmur continued audible.

June 1.—9 A.M. Pulse 92; temperature 99·6°. Free from pain.

9 P.M.—Pulse 64; temperature 100·0°. Sweating profusely.

2.—9 A.M. Pulse 92; temperature 100·2°. Has pains in elbows, right shoulder, and hand; sweating freely.

9 P.M.—Pulse 100; temperature 101·6°.

3.—9 A.M. Pulse 100; temperature 101·4°. Pains continue.

Take 15 grains of salicylate of soda every two hours.

9 P.M.—Pulse 84; temperature 99·8°. Pains in both elbows, right shoulder, and wrist.

4.—9 A.M. Pulse 90; temperature 99·2°. Sweated much during night. Joints still painful, but pain not so severe; murmur still audible at præcordia.

9 P.M.—Pulse 72; temperature 99·8°.

5.—9 A.M. Pulse 72; temperature 97·8°. Pulse soft and compressible; sweating freely; slight pain in right elbow only. Has been sick.

Take salicylate only every four hours.

9 P.M.—Pulse 76; temperature 97·8°.

The temperature now kept normal or subnormal, and the pulse from 65 to 72; brandy was given in small doses for the sickness; the pains and sweating did not entirely disappear until June 9, on which day the medicine was discontinued. The patient was discharged quite well, but with a faint thrill at the heart, and also with both a slight systolic and præsystolic murmur, on June 19.

Case XXXVI.

F. W. B., æt. 13, butcher's boy, admitted May 18, 1877.

Had rheumatic fever six years ago; health otherwise good. Present illness commenced on 14th instant with pains in the feet and knees.

State on admission.—Pulse 109; temperature 101·0°. Knees and ankles swollen, red, hot, and painful. Loud pericardial friction, intensified by pressure, is audible at second left costal cartilage.

11 P.M.—Temperature 100·6°.

20.—10 A.M. Pulse 116; temperature 99·6°. Complains of severe pain at the epigastrium.

9 P.M.—Pulse 128; temperature 99·4°.

21.—9 A.M. Pulse 108; temperature 100·5°. Pain, both in epigastrium and limbs, better.

Take 10 grains of salicylate of soda every two hours.

9 P.M.—Pulse 92; temperature 98·0°. Has taken only two doses of salicylate.

22.—Pulse 72; temperature 98·4°. Has no pain, but there is still swelling of joints.

Take salicylate only every six hours.

The salicylate was discontinued on May 23. The temperature had remained subnormal, and the pains and swelling had altogether subsided for some days, when on June 1 the patient complained of pain in the right knee. Next day both knees were hot, swollen, and painful. Sweating returned, and in the evening the pulse had risen to 90, and the temperature to 100·4°.

June 3.—9 A.M. Pulse 108; temperature 99·8°. Pains in both knees and ankles; sweating freely.

Take 10 grains of salicylate of soda every two hours.

9 P.M.—Pulse 100; temperature 99·8°.

Next day the temperature had again become normal, the pains were easier, and the pulse soft and compressible. The progress towards recovery was now steady; the salicylate was discontinued on June 10, and the patient was discharged quite well on June 19.

Case XXXVII.

M. A. R., æt. 25, laundress, admitted August 10, 1877.

Had rheumatic fever two years ago, and has subsequently suffered from palpitation; present illness commenced on 2nd inst. with pain and swelling of several joints.

State on Admission.—Pulse 126; temperature 101·4°. Urine, sp. gr. 1026, acid, albuminous, face flushed; right hand, wrist, and elbow swollen and painful; both shoulders and hips are also painful on movement, and there is considerable pain and tenderness over the lower half of sternum; lungs normal; heart's impulse diffused, faint thrill at apex, cantering rhythm; heart's sounds weak, and the first obscured by a murmur; pulse small, but firm; is sweating profusely.

Take 15 grains of salicylate of soda every three hours and apply two leeches to præcordia.

August 10.—9 P.M. Pulse 128; temperature 101·6°.

11.—8 A.M. Pulse 116; temperature 101·0°. Much easier, but still has pain in several joints, including the articulation of lower jaw.

10 P.M.—Pulse 116; temperature 100·2°. No pain except on movement; pericardial friction continues; sweating freely; is rather deaf, and hears a noise, as of an engine, in ears.

12.—9 A.M. Temperature 99·6°. Quite free from pain; very deaf; fancies she hears people speaking close to her, and when she closes the eyes sees all manner of things.

Take salicylate only every four hours; brandy two drachms every three hours.

9 P.M.—Pulse 104; temperature 99·4°. Is depressed and very low; very deaf; feels queer, and has much noise in the head; sick after medicine; pain in left hand only.

Take salicylate every six hours.

13.—After reducing the salicylate last night the temperature ran up to 102·6°.

9 A.M.—Pulse 100; temperature 100·6°. Urine free from albumen, sp. gr. 1030; still has noises in head and deafness; no return of sickness; sweating; loud systolic murmur at apex of heart; slight pericardial friction at base.

9 P.M.—Temperature 100·2°.

14.—9 A.M. Pulse 100; temperature 100·6°. General condition improved; noises in head and deafness decreased.

9 P.M.—Pulse 104; temperature 100·2°.

15.—9 A.M. Pulse 100; temperature 100·0°. Improving; still has sweating and præcordial pain; has a singing noise in ears, and still fancies she sees things when she closes the eyes; loud pericardial friction and systolic murmur at apex.

9 P.M.—Pulse 106; temperature 100·0°.

For several days the temperature ranged from 99·4° to 100·0°, and the pulse from 90 to 98; the sweating continued, but the pains altogether subsided after August 15. The condition of the heart was unchanged, and the noises in the ears, with vertigo and headache, were troublesome. On the 19th the tongue became tremulous, and severe retching and sickness supervened; the medicine was then discontinued.

On August 24 there was return of pains in the shoulders and right wrist. At 9 P.M. the pulse was 96; the temperature 101·2°. Next day the temperature was over 100·0° all day, and rose in the evening to 102·3°. On August 26 the rheumatic pains were much worse, and the action of the heart was cantering.

Take 10 grains of salicylate of soda every three hours.

During the following three days the temperature remained over 100·0°; the pulse from 86 to 108. On August 29 the temperature fell to 98·7°. There was no pain, but there was some uneasiness in the head caused by the salicylate. This was discontinued on September 6, and the patient was discharged well, but with both a systolic and præsystolic murmur, on October 10.

Case XXXVIII.

C. T., æt. 16, printer, admitted September 14, 1877.

No personal or family history of rheumatism; illness commenced on September 11 with pains in the knees and arms.

State on Admission.—Pulse 128; temperature 101·8°. Wrists, hands, elbows, knees, and ankles more or less swollen, red, hot and painful; cantering rhythm of heart.

Take 10 grains of salicylate of soda every three hours.

September 14.—9 P.M. Pulse 120; temperature 101·2°.

15.—10 A.M. Pulse 112; temperature 100·6°. Pains easier; rough friction over base of heart.

10 P.M.—Pulse 96; temperature 100·5°.

16.—10 A.M. Pulse 96; temperature 99·4°. Sweating; severe pain in right elbow; pericardial friction continues.

10 P.M.—Temperature 99·4°. Pains much decreased.

From this date until September 26 there was little pain, and the temperature only twice reached 100·0°; it ranged, with these exceptions, from 97·2° to 99·6°; the pulse from 68 to 88. The salicylate was discontinued on September 21. On September 24 the patient complained of slight pain in the elbows and knees, and next day the temperature, previously quite normal, rose to 99·8°.

26.—10 A.M. Pulse 108; temperature 101·6°. Pains in shoulders.

Take 10 grains of salicylate of soda every six hours; brandy, two ounces daily.

9 P.M.—Pulse 88; temperature 100·6°.

27.—10 A.M. Pulse 84; temperature 101·4°.

Take salicylate every three hours.

9 P.M.—Pulse 80; temperature 99·8°. Severe pains in right knee and shoulder; pulse extremely soft and compressible.

28.—10 A.M. Pulse 92; temperature 101·6°.

10 P.M.—Pulse 84; temperature 100·4°.

29.—10 A.M. Pulse 84; temperature 100·4°.

10 P.M.—Pulse 72; temperature 99·8°.

30.—9 A.M. Pulse 88; temperature 100·0°.

9 P.M.—Temperature 99·6°.

October 1.—9 A.M. Pulse 88; temperature 99·8°. Pain now only in right knee.

Omit salicylate.

9 P.M.—Temperature 99·8°.

2.—9 A.M. Pulse 80; temperature 99·2°.

9 P.M.—Pulse 88; temperature 100·2°.

The pains now entirely disappeared, but the temperature remained rather above the normal for some time. Discharged well on November 10.

Case XXXIX.

F. T., æt. 19, draper's assistant, admitted September 17, 1877. Had rheumatic fever ten years ago; present illness commenced on 15th inst. with pains and stiffness in several joints.

State on Admission.—Pulse 96; temperature 103·4°. Knees, ankles, and right shoulder painful, swollen, and hot; redness of ankles; soft blowing systolic murmur at apex of heart; skin dry; rough grazing friction at base of heart.

Apply four leeches to præcordia; take 15 grains of salicylate of soda every three hours.

September 17.—10 P.M. Pulse 88; temperature 102·4°.

18.—10 A.M. Pulse 92; temperature 101·8°. First cardiac sound weak and almost inaudible at the apex of heart; pains and swelling of joints continue.

10 P.M.—Pulse 80; temperature 100·6°. Is wandering; manner excited; pains very severe; eyes injected.

19.—10 A.M. Pulse 96; temperature 100·6°. Patient wandering and restless all night.

Salicylate omitted from 10 P.M. last evening. This morning the patient is restless and irritable, but sensible; complains of pain in left knee and right shoulder; pleuritic friction on left side; crepitation in base of left lung; pericardial friction at base of heart.

Resume salicylate every six hours.

10 P.M.—Pulse 88; temperature 100·6°. Is less restless.

20.—10 A.M. Pulse 96; temperature 100·6°. Joints of hands more swollen and painful.

Take salicylate every four hours.

10 P.M.—Pulse 92; temperature 101·8°. Pain in left hand much worse; pain has also returned in right shoulder.

21.—10 A.M. Pulse 80; temperature 102·4°. Friction at extreme base of left lung; slight rub at apex of heart; second sound reduplicate at base; pains in joints less.

6 P.M.—Temperature 103·2°.

10 P.M.—Pulse 92; temperature 100·6°. Little pain except on movement.

22.—10 A.M. Pulse 92; temperature 100·6°. More pain in knees, less in arms.

During this day the temperature varied much, and ranged from 102·0° to 103·5°.

10 P.M.—Temperature 102·3°.

23. 10 A.M. Pulse 88; temperature 101·8°. Still has wandering pains in knees and hands; heart sounds very muffled; no friction or murmur.

10 P.M.—Pulse 80; temperature 102·0°.

24.—10 A.M. Pulse 76; temperature 99·6°. No pain in joints.

10 P.M.—Pulse 72; temperature 99·6°.

25.—10 A.M. Pulse 84; temperature 97·5°. No pain; systolic murmur at apex of heart; no pericardial friction; scanty crepitation in bases of lungs.

Take salicylate every six hours.

10 P.M.—Pulse 68; temperature 99·4°.

The pain now remained absent, and the temperature ranged from 98·5° to 99·6° until September 30. The pulse fell to 56, became very feeble, and the second sound of the heart was reduplicate at the base. The patient had repeated attacks of epistaxis; two drachms of brandy were given every three hours, but as the depression continued, the salicylate was discontinued on September 29. On September 30, the temperature rose to 101·2°, and on October 2 to 102·3°. The patient now again complained of stiffness in several joints, and sweating recommenced. The salicylate was then ordered to be given in doses of 15 grains every four hours.

October 3.—10 A.M. Pulse 100; temperature 101·6°. Complains of pains in legs and back.

10 P.M.—Pulse 104; temperature 100·2°; had been 102·8° at 2 P.M.

4.—10 A.M. Pulse 100; temperature 100·4°. Less pain; pleuritic friction in left axilla; deficient percussion resonance and harsh breathing in posterior bases of both lungs; faint systolic murmur at apex of heart.

10 P.M.—Pulse 110; temperature 102·2°.

5.—10 A.M. Pulse 112; temperature 101·3°.

10 P.M.—Temperature 102·2°.

6.—10 A.M. Pulse 100; temperature 101·6°. Pains in knees and ankles.

10 P.M.—Pulse 104; temperature 102·3°. Pulse small and very feeble.

Take half an ounce of brandy every three hours.

From October 7 to 12 the temperature ranged from 101·0° to 102·8°, the pulse from 92 to 100. On the 9th there was pain in the left shoulder and the pulse became very weak. The brandy was increased from 4 to 6 ounces in the day. There was much perspiration, and both a systolic and præsystolic murmur were audible at apex of heart.

12.—10 P.M. Pulse 96; temperature 99·2°. No pain. During the 13th and 14th the temperature ranged from 98·0° to 100·0°. There was pain in the left wrist and copious sweating.

From October 14 to 22 there was no pain; the temperature was about normal, and the patient being very anæmic the medicine was discontinued, and tincture of perchloride of iron given. He improved very much in appearance under this treatment, but on October 22 the pulse became more rapid and the temperature rose to 99·4°.

25.—10 A.M. Pulse 132; temperature 101·4°. Right wrist, hand, and instep swollen and painful.

Take salicylate of soda, 15 grains every three hours.

26.—10 A.M. Pulse, 16; temperature 101·2°. Pains continue.

10 P.M.—Pulse 120; temperature 101·6°.

27.—10 A.M. Pulse 124; temperature 99·2°. Has pain now only in the right instep.

10 P.M.—Pulse 120; temperature 100·3°.

The temperature now fell rapidly, and did not exceed the normal after noon of October 28; it subsequently ranged from 97·0° to 98·4°. There was no return of pain; vomiting supervened on the 28th. The salicylate was discontinued on November 2, and the patient was discharged convalescent towards the end of the month.

Case XL.

F. P., æt. 19, clerk, admitted October 19. Previous health good; present illness began on October 16 with pains in the knees and ankles; had rigors on the day of admission.

State on admission.—Pulse 90; temperature 101·0°. Complains of pains in the shoulders, knees, and ankles; frontal headache; sore throat; fauces congested; dry râles over front of left lung; heart sounds normal.

8 P.M. Pulse 96; temperature 102·6°.

20—10 A.M. Pulse 104; temperature 101·6°. Cantering rhythm of heart.

10 P.M.—Pulse 96; temperature 101·8°.

21.—10 A.M. Pulse 110; temperature 102·0°. Pericardial friction just within nipple; slight redness and tenderness of affected joints.

Take 15 grains of salicylate of soda every two hours.

10 P.M.—Temperature 101°.

22.—10 A.M. Pulse 96; temperature 99·5°. Sweating; no pain except on movement; is deaf; pulse soft and compressible.

10 P.M.—Pulse 88; temperature 99·8°. Slight epistaxis; increased deafness.

Take salicylate only every four hours.

23.—10 A.M. Pulse 88; temperature 99·2°. Complains of pain in the mid-sternum and left shoulder; rather less deaf.

10 P.M.—Pulse 76; temperature 99·6°. Faint systolic murmur at apex, and slight rub at base of heart.

24.—10 A.M. Pulse 72; temperature 98·8°. No pain.

Take salicylate only every six hours.

10 P.M.—Pulse 76; temperature 99·8°.

From October 25 to 31 inclusive, the temperature ranged from 97·2° to 99·4°, the pulse from 60 to 74. Slight pains continued, but were chiefly felt on movement; the systolic murmur did not entirely cease, and the pericardial rub was heard for several days. On November 1 the salicylate was discontinued, and iodide of potassium and quinine prescribed instead. On November 2 the pulse and temperature began to rise again. On November 3 the temperature was 100·1° all day, the pulse 100. Both pulse and temperature remained a little elevated, and pains in the elbows and shoulders, with sweating, returned. On November 16, the pains being worse, but the temperature only 99·3°, the salicylate was again prescribed in doses of 15 grains every four hours. The pulse and temperature were lowered at once, but the pains did not rapidly subside. Deafness supervened and became extreme. On November 26 there was still pain in the left elbow. Discharged, but not altogether free from occasional pain and a systolic murmur, on December 14.

Case XLI.

H. L., æt. 13 years, page, admitted November 6, 1877. Previous health good; no history of rheumatism in

family; present illness commenced a few days ago with shivering and chilliness, followed by pains in the knees.

State on admission.—Pulse 138; temperature 103°. Knees swollen and painful when touched; complains of pain in the præcordia, increased by deep breathing; skin hot and dry; cantering rhythm of heart; both sounds rough.

10 P.M.—Pulse 140; temperature 101·6°.

Nov. 7.—10 A.M. Pulse 132; temperature 101·4°. Both ankles and knees swollen and very painful; much tenderness over the præcordia; cantering rhythm continues.

Take 15 grains of salicylate of soda every three hours.

10 P.M.—Pulse 128; temperature 102·4°. Has been wandering; is very restless.

8.—10 A.M. Pulse 112; temperature 99·2°. Pains in limbs better; deafness; faint friction inside left nipple.

10 P.M.—Temperature 99°.

The temperature now fell, and only on a few occasions during the following week rose to 99·6°, being for the most part normal, or a little below the normal standard; the pulse ranged from 80 to 100. Cardiac friction and a systolic murmur were persistently audible, and there still remained some pain and tenderness over the præcordia; the pains in the limbs soon passed away. The boy became exceedingly deaf. On November 13 the tongue was very dry, and vomiting had set in; the salicylate was, therefore, discontinued. On Nov. 17 the temperature rose to 100·6° and the pulse to 100, and continued so until the 19th, when the patient complained of pains in both knees and right shoulder. At 10 P.M. the pulse was 96; the temperature 103·1°.

20.—10 A.M. Pulse 100; temperature 100·2°. Both knees and left elbow are swollen, hot, and tender; both cardiac sounds rough.

Take 15 grains of salicylate of soda every three hours.

The pulse and temperature fell to the normal height on the 21st. On November 30 there was extreme headache, and the medicine was left off. On December 8 there was another accession of pains with fever, which subsided rapidly, and the patient was discharged convalescent, but with a systolic apex murmur, on January 14.

Case XLII.

M. R., æt. 24 years, servant, admitted June 4, 1877. Previous health good; illness commenced on May 28 with

pains in the knees, followed next day by pains in elbows and other joints.

State on admission.—Pulse 92; temperature 99·1°. Both knees, left wrist, elbows, and shoulders painful; first cardiac sound rough; no definite murmur or friction.

9 P.M.—Pulse 108; temperature 101°. Pains more severe; has pain in mid-sternum.

June 6.—9 A.M.—Pulse 88; temperature 100·4°. Pain and swelling of every joint of left upper and lower extremities, and also in right ankle, and wrist.

9 P.M.—Pulse 96; temperature 101·4°. Much pain in joints.

7.—9 A.M. Pulse 100; temperature 100·1°. Pains unchanged.

9 P.M.—Pulse 105; temperature 102·8°.

8.—9 A.M.—Pulse 92; temperature 100°. Knuckles of right hand much swollen, red, and very painful; pains elsewhere as yesterday.

Take 30 grains of salicylate of soda every two hours.

10 P.M.—Temperature 100·2°.

9.—9 A.M. Pulse 116; temperature 101·4°. Sour sweating. Complains of head being hot and stupid; is not quite coherent; wandered last night.

9 P.M.—Pulse 116; temperature 99·4°. Has pain in left wrist only; deaf; seems weak.

10.—9 A.M. Pulse 100; temperature 99·3°. Passed a restless, delirious night; pulse weak; headache; deaf; faint blowing systolic murmur at apex of heart; pericardial rub at base; slight epistaxis last evening.

Take salicylate only every four hours.

9 P.M.—Pulse 120; temperature 100·8°. Headache; sickness after medicine; throat dry; deafness.

Omit salicylate.

11.—9 A.M. Pulse 100; temperature 98·8°. No pain in joints; slight epistaxis; systolic murmur and pericardial friction still audible.

10 P.M.—Pulse 100; temperature 101·4°.

12.—Temperature from 99° to 99·6° all day. Pulse 90. No pain; still sweating.

13.—9 A.M. Pulse 76; temperature 99·6°. Sour sweating; has recurrence of pain; heat and redness in several joints.

Take salicylate of soda, 30 grains, every four hours.

9 P.M.—Pulse 88, small and compressible; temperature 100°.

14.—9 A.M. Pulse 92; temperature 101·3°. Pains in knees, shoulders, elbows, and right wrist.

Take the salicylate every two hours.

9 P.M.—Pulse 88; temperature 100°. Headache; profuse sweating.

15.—9 A.M. Pulse 92; temperature 98·6. Very little pain in joints; deafness has returned.

The temperature now never exceeded 99·4°, and was commonly quite normal. The pulse ranged from 60 to 90. On June 16 severe retching and sickness set in; the throat became dry, the hands tremulous, and the patient restless at night. The deafness also continued for some days. Slight pains recurred from day to day; more or less sweating continued, and pericardial friction was noted on June 21. The salicylate was reduced to a dose every eight hours on June 18, and discontinued on June 24. Discharged well, and without any cardiac murmur, on July 13.

Case XLIII.

T. L., æt. 25 years, carpenter, admitted February 5, 1878. Father gouty; has had three previous attacks of rheumatic fever. Illness commenced on 3rd inst. with pains in knees and ankles.

State on admission.—Pulse 116; temperature 101·4°. Right wrist, and both knees and ankles swollen, red, and tender; pain in præcordia; systolic murmur and rough second sound at base of heart.

Take 15 grains of salicylate of soda every four hours.

10 P.M.—Pulse 120; temperature 102·1°. Skin moist.

February 6.—10 A.M. Pulse 108; temperature 102·4°. Pains in joints easier; profuse perspiration.

10 P.M.—Pulse 80; temperature 101·2°.

7.—10 A.M. Temperature 101°. Free from pain in joints; pericardial friction.

9 P.M.—Temperature 100·4.°

8.—9 A.M. Pulse 88; temperature, 99°. Only slight pain in right knee.

9 P.M.—Temperature 98·6°.

From February 9 to 14 inclusive the temperature was normal or subnormal; the pulse ranged from 76 to 84; there was no pain; systolic murmur at apex of heart, also audible at the angle of scapula. Friction still continued.

The medicine was reduced first to three times and then to twice a day, and discontinued on the 14th.

15.—Pains began to recur, and the temperature rose slightly. On the 17th the temperature was 100·8°, and the ankles had become swollen and painful. On Feb. 18 and 19 the temperature was 101·8°, and there were pains in the wrists.

19.—Take salicylate of soda, 15 grains, every two hours.

9 P.M. Pulse 120; temperature 102°.

20.—9 A.M. Pulse 104; temperature 100·6°. Sweating; pericardial friction; pains in wrist less severe.

9 P.M.—Pulse 100; temperature 100·6°.

21.—9 A.M. Pulse 104; temperature 99·6°. Still pain in right wrist; sweating freely.

The temperature fell next day to normal, and continued so until the beginning of March. Sickness supervened on Feb. 23, and the salicylate was left off on the 26th.

A return of fever and pains in the joints occurred early in March, with profuse sweating. For some days this relapse was treated with iodide of potassium only; but on March 7, the joints of both hands being swollen and very painful, and the temperature over 101°, 15 grains of salicylate of soda were ordered to be given every four hours, small doses of brandy being administered at the same time.

9 P.M.—Pulse 108; temperature 101·6°.

8.—10 A.M. Pulse 100; temperature 100·0°. Pains much better; systolic murmur at apex; friction at base of heart.

9 P.M.—Temperature 98·7°.

From the 8th to 23rd of March the temperature ranged from 97° to 98·6°, the pulse from 68 to 90. The pains subsided, and the pericardial friction became less loud. The salicylate was reduced to a dose every six hours on March 9, further reduced to three times a day on the 13th, and finally omitted on the 16th. On March 24 there was return of pain in the right knee and sweating, and the temperature rose to 101°. The fever and pains continued until March 27, when, the wrist and knee-joints having become swollen and painful, the pulse being 126, and the temperature 101·4°, 15 grains of salicylate of soda were again ordered to be taken every four hours.

9 P.M.—Temperature 101·6°.

28.—9 A.M. Pulse 96; temperature 101·5°.

9 P.M.—Pulse 88; temperature 100·6°.

Next day the temperature fell to the normal, and the patient again improved. The salicylate was gradually discontinued, and finally left off on April 6.

A few days later the temperature again rose, and there was a return of pains, but less severe. The salicylate was not again prescribed, and the patient was discharged, on April 25, with an apex systolic murmur.

Case XLIV.

F. A., æt. 14 years, admitted March 20, 1878. Father has had rheumatic fever, and patient has himself had one previous attack; present illness commenced with pains in the principal joints about three weeks since; he had, however, returned to work when the pains in the joints recurred, and he experienced pain in the præcordia.

State on admission.—Pulse 84; temperature 99°. Skin moist; both knees swollen, hot, and painful; apex of heart beats outside and below nipple; impulse heaving and diffused; compound murmur at base; faint systolic murmur at apex; pericardial friction over præcordia.

9 P.M.—Pulse 88; temperature 102·2°. Urine normal.

March 21.—9 A.M. Pulse 90; temperature 98·4°. Sweating; no pain.

9 P.M.—Pulse 90; temperature 100·2°.

For several days the temperature ranged from 98·5° to 100·5°, but the patient did not become worse. On March 24, the pains having increased, and the morning temperature being 99·4°, 15 grains of salicylate of soda were ordered to be taken every four hours. The temperature fell within a few hours, and on March 28 the salicylate was reduced to a dose every six hours, and on the 30th to a dose three times a day. On April 8, the boy appearing to be weak and anæmic, the salicylate was discontinued and citrate of iron substituted. On April 10 the temperature rose to 100·4°, and the pulse to 100; sweating and pains in both knees and ankles recurred; and, as the fever increased and the pains attacked other joints, 15 grains of salicylate were ordered to be taken every four hours on April 11.

April 12.—9 P.M. Pulse 116; temperature 101·5°. Sweating.

13.—9 A.M. Pulse 104; temperature 98·6°. The temperature now kept normal or subnormal, and the pulse quiet until April 29; the patient was likewise free from pain. On

April 15 the salicylate was reduced to a dose three times a day, and on the 17th, in consequence of the occurrence of vertigo and severe headache, it was reduced to one dose daily. Brandy was also prescribed in small doses. On April 26 the medicine was altogether discontinued. Two transient attacks of fever, with pains and sweating, subsequently occurred; each lasted four or five days, but salicylate was not again had recourse to, and the patient was discharged convalescent, but with the cardiac murmur, on June 28.

Case XLV.

E. B., æt. 46, servant, admitted October 21, 1878. Has already had one attack of rheumatic fever. Present illness commenced a week before admission with wandering pains in the limbs.

State on admission.—Pulse 114; temperature 100·6°. Pain of shoulders, and pain and swelling of both knees and right wrist; occasional sibilus over chest; thrill at apex of heart; well-pronounced præsystolic murmur and roughness of first sound.

9 P.M.—Temperature 102·6°.

October 23.—9 A.M. Pulse 96; temperature 100·6°.

9 P.M.—Pulse 112; temperature 102·4°.

24.—9 A.M. Pulse 100; temperature 100·7°. Knees are less painful; now complains of pains in the hips and shoulders.

Take 15 grains of salicylate of soda every four hours.

9 P.M.—Pulse 104; temperature 102·5°.

25.—9 A.M. Pulse 95; temperature 100·8°.

9 P.M.—Pulse 96; temperature 100·4°.

26.—9 A.M. Pulse 84; temperature 98·4°. Feels much better; has now pain only in right wrist and hips.

9 P.M.—Temperature 99°.

27.—9 A.M. Pulse 84; temperature 98°. Complains of deafness, giddiness, and tinnitus aurium.

Omit salicylate.

Remained free from pain until the evening of the 30th, when pains returned in both knees; the temperature had previously risen to 100°. Next day there was pain in the right wrist, and at 9 P.M. the pulse was 92, and the temperature 102°.

Take 10 grains of salicylate of soda every four hours.

November 1.—9 A.M. Pulse 92; temperature 99·4°.

Skin hot and dry; complains of feeling sick; pains diminished.

9 P.M.—Pulse 96; temperature 102°.

November 2.—9 A.M. Pulse 88; temperature 99·0°. Still pain in right hand and shoulder.

9 P.M.—Pulse 88; temperature 100·6°.

3.—9 A.M. Pulse 76; temperature 99°. Sour sweating; no pains; deaf.

9 P.M.—Pulse 88; temperature 98·2°.

4.—9 A.M. Pulse 68, irregular and intermittent; temperature 98·2°. Deafness increased.

Omit salicylate; brandy, 2 drachms, every three hours.

The temperature beginning to rise during the day, the salicylate was resumed, but next day, the impulse of the heart having become feeble, and other symptoms of the effect of the medicine having manifested themselves, it was reduced to a dose three times a day.

The temperature now kept normal or subnormal until Nov. 12; pulse about 74. Patient complained of so much oppression at the chest on the 9th that the salicylate was again discontinued.

On Nov. 12 felt rather chilly, and in the evening the left wrist and some of the small joints of the hand became painful and swollen. Pulse 92; temperature 101·8°. This continued until, on the 14th, other joints also became painful, the rhythm of the heart cantering, and the temperature persistent at 101·6°.

Take 10 grains of salicylate of soda every four hours.

9 P.M.—Pulse 100; temperature 102°. Has been sick.

15.—9 A.M. Pulse 96; temperature 99·8°. Pains less.

9 P.M.—Pulse 96; temperature 101·2°.

16.—9 A.M. Pulse 88; temperature 99·8°. Deaf.

9 P.M.—Pulse 84; temperature 98°.

The temperature now kept normal or subnormal; the pulse ranged from 56 to 80. The action of the heart became irregular; deafness increased; the patient complained of humming noises in the head, and was very sick. Brandy was administered in increasing doses, and the medicine was reduced to a dose every eight hours on November 20, to twice a day on the 27th, and finally omitted on December 4. Discharged, with the cardiac murmurs, as on admission, on December 10.

Case XLVI.

E. R., æt. 31 years, dressmaker, admitted January 8, 1879. Had rheumatic fever in childhood; health subsequently good. Present attack commenced with pains in the wrists and knees on the 5th inst.

State on admission.—Pulse 100; temperature 101·2°. Both knees and ankles are swollen and painful; faint systolic murmur at apex of heart.

9 P.M.—Pulse 100; temperature 100·8°. Pains have increased.

January 9.—9 A.M. Pulse 104; temperature 98·8°.

1 P.M.—Temperature 101·4°. Pericardial friction; complains of pain in lower part of sternum; pains in joints more severe.

Take 30 grains of salicylate of soda every two hours, for four times.

10.—9 A.M. Pulse 96; temperature 101·2°. Pains increased; pericardial friction very loud.

Repeat the salicylate every two hours for four times.

9 P.M.—Pulse 98; temperature 100·8°. Is easier; slight deafness.

11.—9 A.M. Pulse 98; temperature 100°. Pulse feeble; right hand only painful.

Repeat salicylate every two hours for four times; 2 drachms of brandy every three hours.

9 P.M.—Pulse 84; temperature 99·1°.

12.—9 A.M. Pulse 72; temperature 98·4°. Pains greatly relieved; pericardial friction continues.

Take salicylate every two hours for three times.

9 P.M.—Pulse 88; temperature 99·4°.

13.—9 A.M. Pulse 72; temperature 99°. Left ankle and both knees are again painful.

Take 30 grains of salicylate every two hours for four times.

9 P.M.—Pulse 84; temperature 99·2°.

14.—9 A.M. Pulse 88; temperature 99·6°. Pains and pericardial friction continue.

Take 15 grains of salicylate every two hours.

The temperature now ranged from 98·6° to 99·2° until January 27; the pulse from 72 to 96. The pains continued severe until the 18th, and then subsided; headache, vertigo, and deafness now supervened. The salicylate was reduced to a dose every three hours on the 18th, and omitted on January 31, on account of an attack of diarrhœa, attended by griping.

On February 1 pain again reappeared in the right knee and ankle; on the 3rd other joints became affected, and the patient had an anxious aspect, and could not rest without opiates; the temperature rose to 101·2°, and the pulse to 108.

Take 15 grains of salicylate of soda every two hours; brandy, half an ounce, every four hours.

February 4.—9 A.M. Pulse 116; temperature 101·6°. Pains easier. Perspiring copiously.

9 P.M.—Pulse 100; temperature 100·8°.

5.—9 A.M. Pulse 96; temperature 99·2°. Is free from pain in the joints, but has pain in the abdomen, and has been retching; sweating freely. Bowels relaxed.

9 P.M.—Pulse 92; temperature 99·2°.

The temperature was now normal until February 10. The salicylate was discontinued on the 7th, in consequence of severe headache. On February 11 the morning temperature was 99·6°, and the evening 100·8°; and the right knee had again become painful.

12.—9 A.M. Pulse 102; temperature 99°. Knees and ankles hot and painful.

Take salicylate of soda, 15 grains, every four hours.

9 P.M.—Temperature 99·6°.

13.—9 A.M. Pulse 100; temperature 100·4°. Pains decreased.

9 P.M.—Temperature 100°.

Next day the temperature was subnormal, and the pulse 84; the patient was generally better, and had very little pain. The improvement was progressive, and the salicylate was reduced to a dose every six hours, on the 18th, to three times a day on the 22nd, and discontinued on the 26th. On March 2 there was again a rise of temperature to 100°, and of pulse to 96, with return of pains in the left elbow, knee, and ankle. The salicylate was resumed every two hours, and the fever and pains again speedily gave way.

Discharged, at her own request, on March 13.

Case XLVII.

C. B. W., æt. 21, colourer, admitted January 24, 1879. Previous health good; illness began a few days before admission with pain and swelling of the left ankle, and copious perspiration.

State on admission.—Pulse 100; temperature 100·6°.

Left ankle much swollen, hot, red, and very painful. Faint thrill and loud systolic murmur at the apex of heart.

9 P.M.—Pulse 100; temperature 103·0°. Restless.

January 25.—9 A.M. Pulse 92; temperature 101·1°. Sweated freely during night. Left knee painful.

9 P.M.—Pulse 104; temperature 102·4°.

26.—9 A.M. Pulse 92; temperature 101·6°. Left knee more painful.

9 P.M.—Pulse 100; temperature 102·9°.

27.—9 A.M. Pulse 88; temperature 100·2°. Pain in left knee and ankle much better; right ankle slightly painful.

9 P.M.—Pulse 96; temperature 102·6°.

28.—9 A.M. Pulse 88; temperature 100·4°. Much pain in right knee, and some pain in hips.

Take 15 grains of salicylate of soda every two hours.

9 P.M.—Temperature 102°.

29.—9 A.M. The temperature has ranged from 100° to 101° during the night; it is now 99°; pulse 88. Slept well. Pains decreased. Slight deafness; feels sick after medicine. Sweating.

Take 2 drachms of brandy every three hours.

9 P.M.—Pulse 76; temperature 100·4°.

30.—9 A.M. Pulse 80; temperature 98·2°. Has only occasional twinges of pain in joints. Complains of sore throat, deafness, vertigo, and buzzing in the ears; perspiring freely; back of fauces covered with tenacious mucus.

Take salicylate only every three hours.

9 P.M.—Pulse 76; temperature 98·6°.

The temperature, with one exception, now remained normal until February 25. On January 31 there was sickness and diarrhœa; three minims of tincture of opium were added to each dose of medicine, which was now reduced to a dose every four hours. The pains ceased, but sweating continued; sickness occasionally occurred. On February 11, when there had been no pain for several days, the salicylate was omitted; it had been continued every four hours up to that date. On February 24 pain was felt in both arms and shoulders; sweating still continued at night.

February 26.—9 A.M. Pulse 108; temperature 103·1°. Skin moist; complains of pains in legs; ankles slightly swollen and tender.

Take 15 grains of salicylate of soda every three hours.

27.—9 A.M. Pulse 112; temperature 101·8°. Copious sweating; right ankle swollen, red, and very painful.

9 P.M.—Temperature 101·2°.

28.—9 A.M. Pulse 100; temperature 100°. No pain except on movement.

9 P.M.—Pulse 96; temperature 100·6°.

March 1.—9 A.M. Pulse 85; temperature 99°.

1 P.M.—Temperature 101·4°.

Take the salicylate every two hours.

9 P.M.—Temperature 99·4°.

The temperature now again became normal; the pains left, but sweating continued. On March 2 sickness set in, and the medicine was reduced to a dose every four hours. Next day, although the temperature had again risen to 100°, the sickness continuing, the medicine was discontinued. At night the temperature was 102·6°, and it ranged during the following three days from 101·8° to 103°. On March 10, there being some threatening of a relapse of pain, the salicylate was again prescribed in doses of 15 grains every three hours; this again caused sickness and diarrhœa; three minims of tincture of opium were added to the salicylate, and in two days the temperature fell to the normal. On March 14 the salicylate was reduced to a dose every six hours, on the 16th to a dose every eight hours, and it was finally omitted on the 21st. After its omission the temperature rose to 101°, but fell again in a couple of days, and the patient was discharged convalescent at the end of March.

Case XLVIII.

E. P., æt. 21 years, admitted on May 3, 1879. Had rheumatic fever at 10 years of age; father was likewise rheumatic. Illness commenced about a week ago with pains in the loins and knees, and sweating at night.

State on admission.—Pulse 104; temperature 102·8°. Has pain in most of the larger joints; right wrist, knee, and ankle swollen and tender; high-pitched systolic murmur at apex of heart.

9 P.M.—Pulse 120; temperature 102·4°.

May 6.—9 A.M. Pulse 128; temperature 100·3°. Pains much the same.

9 P.M.—Pulse 108; temperature 102·5°.

7.—9 A.M. Pulse 100; temperature 101·9°. Pulse intermitting; pains easier.

9 P.M.—Pulse 104; temperature 102·3°. Severe pain in the left sterno-clavicular articulation; slight delirium.

8.—9 A.M. Pulse 108; temperature 103°. Right knee very painful, red, and swollen; complains of pain over the middle of sternum; heart's rhythm cantering; wandered during night.

Take 15 grains of salicylate of soda every two hours.

9 P.M.—Pulse 104; temperature 101·8°.

9.—9 A.M. Pulse 104; temperature 99·2°. Urine, sp. gr. 1031, acid, albumen one-seventh. Had a restless night. Complains of pain across the loins.

9 P.M.—Pulse 127; temperature 100·8°. Has pleurisy on the left side.

10.—9 A.M. Pulse 84; temperature 98·8°. Pulse intermittent; tongue dry and brown; wandered much during night; is free from pain.

9 P.M.—Pulse 88; temperature 101·6°.

11.—9 A.M. Pulse 88; temperature 98·5°. Slept better, free from pain; coarse pleuritic friction on left side; rhonchus over front of lungs.

Take salicylate of soda, 15 grains, every four hours.

9 P.M.—Pulse 96; temperature 100·4°.

12.—9 A.M. Pulse 96; temperature 100·4°. Pleuritic friction over left side, and also at right posterior base. Pulse intermittent; can move limbs freely.

9 P.M.—Pulse 96; temperature 100·6°.

13.—9 A.M. Pulse 96; temperature 99·6°. Urine shows a bare trace of albumen.

From this date until May 22 the temperature never rose above 99·6°, and the pulse ranged from 72 to 90. On May 14 there was reduplication of the first cardiac sound at the base. Two ounces of brandy daily were then ordered, and the salicylate given only every four hours. On the 17th, the temperature being quite normal and the pulse quiet, it was reduced to three doses in the day. On May 19 the mouth became aphthous, and the salicylate was omitted. On May 23 there was pain in the right knee, and the evening temperature rose to 101·4° During the next two days the temperature was over 99° in the morning, and 101·3° in the evening. Pains now returned in several joints. On May 28 the right knee and left wrist were swollen, and the other knee and ankles were painful. Pulse 92; temperature 102·1°.

Take 15 grains of salicylate of soda every four hours.

9 P.M.—Pulse 72, intermittent; temperature 102·8°.

29.—9 A.M. Pulse 72, thrilling; temperature 98·2°.

The temperature and pulse now remained normal until June 7. On May 31 the salicylate was reduced to three doses a day, and on June 3 it was omitted. On the evening of June 7 the temperature rose and kept a little over the standard of health until June 10, when it was 101·7°, and the pulse 108. The patient now complained of pains in the knees. Slight pleurisy again occurred. On the evening of June 14 the temperature was 103·2°, and the right wrist and hand were swollen, red, and very painful. Next day 15 grains of salicylate of soda were ordered every four hours. In thirty hours the temperature again fell, and the pulse became normal in frequency. The pains entirely subsided, and the patient was discharged convalescent on July 18. The systolic murmur and a slight prefix to the systole were still audible.

Case XLIX.

A. B., æt. 22 years, nurse, admitted April 29, 1879. Previous health good; illness began two or three days before admission with pains in various joints.

State on admission.—Pulse 120; temperature 101·2°. Knees and left wrist swollen, red, and tender; pain also in right ankle and shoulder; skin dry; dry râles over lungs and scanty crepitation in base of left lung.

Take 15 grains of salicylate of soda every three hours.

April 30.—9 A.M. Pulse 120; temperature 102·1°. Sweating; joints continue painful.

Take salicylate every two hours.

9 P.M.—Pulse 124; temperature 101·8°. Very restless.

May 1.—9 A.M. Pulse 100; temperature 99·5°. Adventitious sounds in lungs have nearly cleared off.

10 P.M.—Pulse 92; temperature 100·2°.

2.—9 A.M. Pulse 100; temperature 100°. Pains easier; is rather deaf.

9 P.M.—Pulse 88; temperature 100°.

3.—9 A.M. Pulse 84; temperature 99°. Free from pain; perspires much.

9 P.M.—Pulse 92; temperature 98·1°.

Take salicylate every four hours.

The temperature kept about 99° until May 8. On this day the left wrist again became hot, swollen, and tender, and there was some pain in the left leg; the temperature rose to 100·4°. The salicylate was increased to a dose every four hours. During the next two days the temperature ranged from 101° to 103°, and the pains increased.

11.—9 A.M. Pulse 116; temperature 103°. Perspiring; right arm very painful.

Take 15 grains of salicylate of soda every two hours.

9 P.M.—Temperature 101·6°.

12.—9 A.M. Pulse 116; temperature 101·5°. Has pain on left side of thorax; pleuritic effusion into left pleura; less pain in joints; sweating.

9 P.M.—Pulse 100; temperature 101·9°.

The temperature remained stationary on the 13th, but became normal on the 15th. The pains, though not gone, were much easier. The salicylate was reduced to a dose every four hours, and on 17th to three times a day. On the 21st there was some return of pain, and the temperature rose to 101·2°. These pains increased, and the temperature kept above the normal until, on May 24, the right knee and left ankle became swollen and painful, and there were less pronounced pains in other joints. Pulse 96; temperature 101·3°.

Take 15 grains of salicylate of soda every four hours.

9 P.M.—Pulse 104; temperature 102·4°.

The next two days the temperature ranged from 100° to 101·5°, and the pains subsided. From May 28 until June 15 the temperature was normal, and the pulse ranged from 84 to 56. The pains left entirely on May 31, and on June 2 the salicylate was discontinued. Discharged well on June 24.

Case L.

E. H., æt. 19, housemaid, admitted on July 21, 1879. Previous health good. Present illness commenced a few days before admission with pains in knees, ankles, and shoulders.

State on admission.—Pulse 92; temperature 102°. Sweating; both knees and left ankle swollen, red, and painful; complains of pains in the præcordia; a systolic murmur heard over the præcordia.

10 P.M.—Pulse 96; temperature 101·4°.

July 22.—9 A.M. Pulse 92; temperature 101·2°.

10 P.M.—Pulse 88; temperature 101·7°.

23.—10 A.M. Pulse 84; temperature 102·2°. Left hand swollen and very painful; sweating profusely.

Take 15 grains of salicylate of soda every three hours.

10 P.M.—Pulse 96; temperature 101·4°.

24.—10 A.M. Pulse 76; temperature 99·4°; complains

of deafness and of noise in the ears; no pain in the limbs; first sound of heart very indistinct, tenderness over the præcordia; pericardial friction. Brandy, two drachms, every four hours.

10 P.M.—Pulse 88; temperature 100·4°.

25.—9 A.M. Pulse 80; temperature 98·8°. Has still pain in left knee, other joints easy; deaf.

11 P.M.—Temperature 99·1°.

26.—9 A.M. Pulse 68; temperature 99·2°. Has pain in loins and hips.

9 P.M.—Pulse 68; temperature 100·2°.

The temperature now scarcely exceeded the normal until July 31. The pains also entirely left. On July 29 the salicylate was reduced to a dose every four hours, and was omitted on the 30th, because the pulse became irregular both in force and rhythm and the tongue much injected. On the evening of the 31st some pain was experienced in both knees and left shoulder; and the temperature rose to 100·3°. On the evening of August 1 the temperature was 102·2°.

August 2.—9 A.M. Pulse 104; temperature 101·4°. Pains in both hands; left wrist swollen; pains in knees and shoulders.

Take salicylate of soda, 15 grains, every four hours.

9 P.M.—Pulse 108; temperature 102°.

3.—9 A.M. Pulse 85; temperature 100·4°. Sweating; knees and ankles still very painful; hands less painful.

9 P.M.—Pulse 90; temperature 101·4°.

4.—9 A.M. Pulse 72; temperature 98°. Complains of pain in right shoulder; sweating.

9 P.M.—Temperature 100·2°.

From August 5 to August 20 the temperature was for the most part normal, and never exceeded 99·2°; the pulse under 70. The pains did not entirely subside until August 11, but were slight. Pericardial friction and the apex systolic murmur were still heard on August 11. The salicylate was reduced to a dose every six hours on August 11, and to a dose three times a day on August 15; it was then discontinued. On August 21 pains returned in the left hand, and the temperature rose to 102°.

Take 20 grains of salicylate of soda every eight hours.

The temperature fell slowly, and did not become normal until August 27; the pains having likewise subsided, the medicine was discontinued on September 7. Two additional

relapses occurred subsequently, and were likewise treated with salicylate of soda. The patient was discharged, at her own request, on October 16. The cardiac murmur was still present on her discharge.

SUMMARY.

I now proceed to give a brief summary of each of the above described cases before endeavouring to draw any conclusions from them :—

No. I.—The patient, who had previously had an attack of rheumatic fever, was admitted at an early stage of her illness, and was at once placed upon 20-grain doses of salicylate of soda every two hours. She was already suffering from pericarditis when admitted.

The salicylate produced no very obvious effect either upon the temperature or the course of the disease, hyperpyrexia being developed on the fourth day after beginning the treatment, which was then discontinued, and recovery took place under the use of cold baths and full doses of quinine.

Deafness, epistaxis, sickness, and considerable depression soon followed the administration of the salicylate; she also manifested hallucinations both of sight and hearing.

No. II.—The patient had already had one attack of rheumatic fever. The second day after admission she was put upon 15-grain doses of salicylate of soda every two hours.

Headache, giddiness, and vomiting commenced within thirty hours from the commencement of the treatment, and hyperpyrexia set in on the third day. The salicylate was then discontinued, and the patient recovered under the use of cold baths and full doses of quinine.

No. III.—The patient, a middle-aged woman, who had already suffered severely from rheumatic fever in early life, was admitted with rheumatic fever, complicated with bronchitis and emphysema; she was also the subject of serious cardiac disease. The day after admission she was placed upon full doses of salicylate of soda, which certainly appeared to produce a decided and rapid effect. The temperature fell within thirty-six hours to the normal standard, and, though not so quickly, the pains also subsided. This improvement was coincident with the development of deafness, noises in the ears, and increased irregularity of the

heart's action. The salicylate was discontinued after the patient had taken it for forty hours, and death ensued on the following day.

No. IV.—The patient was very ill when admitted. The disease was attended by pneumonia of the right lung and pericarditis. She was placed upon the salicylate before I saw her. The temperature, pulse, and respirations all fell very quickly under somewhat large and frequent doses of the medicine, but this improvement was only of brief duration, for the temperature rose again in a few hours to its former height; meanwhile deafness, delirium, and, notwithstanding the free use of brandy, such extreme prostration had set in, that it became necessary to discontinue the salicylate. The patient died on the eleventh day.

No. V.—The patient had suffered from chorea in boyhood. When he came into the hospital there was already pericarditis, and pneumonia was commencing in the right lung. He was put upon 15-grain doses of salicylate of soda every two hours on the second day after admission. The temperature appeared to be somewhat controlled by it, and the pains subsided, but considerable effusion took place into the pericardium; epistaxis supervened on the third day, but the salicylate was continued, though less frequently, for ten days. When it was discontinued the temperature rose again as high as at first, but again came down when the treatment was resumed. When the medicine was omitted a second time the temperature once more rose, and the pains in the joints reappeared, but the salicylate was not prescribed for this second relapse. Deafness and epistaxis followed the use of the salicylate. The patient was 74 days in the hospital.

No. VI.—The patient was suffering from a second attack of rheumatic fever, complicated with bronchitis; pericarditis developed a few hours after admission; on the next day he was placed upon treatment, with full doses of salicylate of soda. The temperature at first fell rapidly, and became normal on the fourth day, but soon rose again and remained above the normal standard until the broncho-pneumonia subsided. The salicylate appearing to exert no permanently beneficial influence, was abandoned after thirteen days' trial. The patient was discharged on the 62nd day.

No. VII.—The patient entered the hospital for a second attack of rheumatic fever, complicated with pericarditis and pleuro-pneumonia. She was put upon the treatment, with full doses of salicylate of soda, the day after admission. The

temperature was materially reduced on the second day, but did not become normal; and the salicylate appearing to have no permanent effect, it was discontinued on the fifth day.

Epistaxis, deafness, and delirium supervened on the second day from beginning the treatment. The patient was 66 days in hospital.

No. VIII.—This patient had also had a former attack of rheumatic fever, and been subject to cough. The disease was complicated with bronchitis from the first, and pericarditis supervened on the second day. Placed upon full doses of salicylate of soda the second day after admission, the temperature and pulse speedily fell, and the pains ceased. The treatment was persevered with for ten days, but five days after it was discontinued the pains recurred, pericarditis again became active, and the temperature rose. On the fourth day of this relapse salicylate of soda was again prescribed, and once more the temperature came down, and, though more slowly, the pains subsided. The salicylate was continued for fourteen days, when convalescence seeming to be established, it was omitted. At the expiry of three days there was another relapse, both of rheumatism and also of bronchitis and pericarditis, but the salicylate was not again prescribed.

Soon after being placed upon the treatment the first sound of the heart became very feeble, and there was slight giddiness. The patient was 66 days in hospital.

No. IX.—The patient came into the hospital for a primary attack of rheumatic fever, attended with delirium, and apparently some pericardial effusion, although no friction was audible. She was placed upon full doses of salicylate of soda the day after admission. The temperature fell in a few hours, and the pains diminished, but the temperature did not fall to the normal standard, and pneumonia was developed after the physiological effects of the salicylate had become manifest. The treatment was intermitted on the fourth day. Three days subsequently pains returned in several joints, and the temperature rose until it touched 104°. Large doses of salicylate of soda were then administered, and the temperature and pulse became normal, and the pains subsided in three days. When the medicine had been for two days reduced to a single dose of 30 grains daily, pleurisy set in, and pains in the joints recurred. The salicylate was now again administered more frequently, with the effect of reducing the temperature and diminishing

the pains. Three similar relapses subsequently occurred; and when at length the patient was discharged her heart was so damaged that she was readmitted some months afterwards, and died of the cardiac disease consequent upon the rheumatic fever.

Sickness and deafness soon occurred after commencing the treatment, and the patient became noisy, restless, and the subject of hallucinations, supposing that she saw persons and heard noises about her bed. Sickness occurred whenever the salicylate was resumed, and on one of these occasions the matters vomited were of a grumous nature. She was 181 days in hospital.

No. X.—The patient, a young child, was admitted for a first attack of rheumatic fever, with endocarditis and a very high temperature. Salicylate of soda was ordered the day after admission, and the pulse and temperature fell and the pains subsided rapidly. On the fourth day, when the little patient was already under the full influence of the medicine, pneumonia occurred. The salicylate was discontinued on the eleventh day, and its omission was followed by a relapse. Pericarditis, accompanied with chorea, followed this relapse, and there was some reason for supposing that embolisms had passed both into the spleen and kidneys.

Sickness commenced some days after commencing the treatment, and was so persistent that it became necessary to discontinue the salicylate. She was 98 days in hospital.

No. XI.—The patient was admitted for a very mild attack of rheumatism. The temperature was under 100° at the time of admission, but rose to 101·4° on the evening of the same day. Put upon 10-grain doses of salicylate of soda every four hours, the temperature fell and the pains subsided within twenty-four hours. The patient was only 12 days in hospital.

No. XII.—The patient, a young child, was admitted for a mild primary attack of rheumatic fever attended by pericarditis. The day after admission 10-grain doses of salicylate of soda, every two hours, were prescribed. The temperature and pulse became subnormal next day, and the pains subsided soon afterwards. Discharged well 22 days after admission.

No. XIII.—The patient, also a young child, was admitted for a mild primary attack of rheumatic fever with pericarditis. Placed upon 10-grain doses of salicylate of soda every three hours on the second day after admission, the tempera-

ture fell at once to the normal standard and the pains disappeared.

Four days after commencing the treatment the first sound of the heart was found to be almost inaudible. The salicylate of soda was now discontinued, and brandy ordered. Was 24 days in hospital.

No. XIV.—The patient had already had three attacks of rheumatic fever. Pericarditis was present on admission. The temperature was already subsiding when, on the third day after admission, she was put upon 15-grain doses of salicylate of soda every three hours, and it became in a few hours afterwards quite normal.

Deafness, giddiness, and sickness soon supervened, and the vomit contained blood. Recovery was rapid, and the patient was discharged on the 20th day.

No. XV.—The patient was admitted for a mild primary attack of rheumatic fever, with pericarditis. On the second day he was ordered 15 grains of salicylate of soda every four hours. The temperature fell within a few hours, and the pains altogether left on the fourth day.

Gastric irritability and injected tongue supervened on the second day after commencing the treatment. Discharged convalescent on the 15th day.

No. XVI.—The patient was admitted for a mild second attack of rheumatic fever. Placed upon 15-grain doses of salicylate of soda every four hours the day after admission, the temperature, previously as high as 103°, became normal within 48 hours.

Injection of the fauces, sore throat, sickness, and deafness soon followed the use of the salicylate. Was 23 days in hospital.

No. XVII.—The patient, who had suffered many years before from rheumatic fever, was admitted for a second attack. She was placed upon 15 grains of salicylate of soda every four hours on the day of admission. The temperature became normal within 36 hours, but the pains abated more slowly.

On the fourth day after beginning the treatment the first sound of the heart became very feeble, and next day the patient complained of giddiness and noises in the ears. Discharged on the 31st day.

No. XVIII.—The patient was admitted for a mild primary attack of rheumatic fever. He was placed upon 15-grain doses of salicylate of soda every four hours on the day

of admission. The temperature very rapidly came down, and was normal on the second day; the pains also subsided. Discharged on the 32nd day.

No. XIX.—The patient was admitted for a second attack of rheumatic fever, accompanied by pericarditis, and placed upon 10-grain doses of salicylate of soda every three hours. The temperature and pulse became normal within 36 hours, and the pains and swelling of the joints subsided. Discharged convalescent on the 35th day.

No. XX.—The patient, a young girl, was admitted for a primary attack of rheumatic fever and pericarditis. She was put upon salicylate on the day after admission. The temperature became normal within a few hours, and the pains abated on the third day.

Vomiting soon followed the use of the medicine, and the impulse of the heart became feeble and the first sound very faint on the eighth day. Discharged quite well on the 39th day.

No. XXI.—The patient came into hospital for a first attack of rheumatic fever and pericarditis. She was placed upon 15 grains of salicylate of soda every two hours the second day after admission. The temperature and pulse fell to the standard of health on the third day from commencing the treatment, and the pains left the next day.

Intense headache manifested itself on the fifth day after beginning the salicylate, which was then reduced in quantity, and was discontinued altogether on the seventh day, because the pulse became irregular and the first sound of the heart almost inaudible, and the patient complained of noises in the ears. Discharged convalescent on the 41st day.

No. XXII.—The patient was admitted for a primary attack of rheumatic fever. He was not put under special treatment until the fifth day after admission, when 15 grains of salicylate of soda were ordered every four hours. The temperature fell to the normal standard and the pains subsided within 24 hours. Discharged on the 26th day.

No. XXIII.—The patient was admitted for a second attack of rheumatic fever with pericarditis. Put upon treatment, with 15-grain doses of salicylate of soda every two hours, the second day after admission, the temperature fell to the normal standard, and the pains subsided within 24 hours.

Vomiting supervened the day after beginning the treatment; and deafness, vertigo, and feeble pulse ensuing the next

day, the salicylate was discontinued after the patient had taken 17 doses. Discharged well on the 30th day.

No. XXIV.—The patient was admitted for a relapse of his first attack of rheumatic fever. On the day of admission he was placed upon 15 grains of salicylate of soda every two hours. The temperature fell to the normal standard within twenty-four hours, and the pains soon subsided. Discontinuance of the medicine was followed by a temporary rise of temperature, without any recurrence of pains.

Deafness ensued the day after beginning the treatment, and vertigo, wandering of mind, and epistaxis followed. The heart was apparently unaffected by the rheumatism, but the second sound became reduplicate when the physiological action of the salicylate was developed. Discharged well on the 26th day.

No. XXV.—The patient had already been laid up for six weeks with a first attack of rheumatic fever when admitted. Both pericarditis and endocarditis were already present. The day after admission he was put upon 15 grains of salicylate of soda every four hours. The temperature became normal in 36 hours, and the pains in the joints rapidly diminished. Discharged on the 22nd day.

No. XXVI.—The patient was admitted for a primary attack of rheumatic fever and pericarditis on the eighth day of her illness. She was placed under treatment, with 15 grains of salicylate of soda every four hours, on the fourth day after admission. The temperature had already fallen when the treatment was commenced, and did not rise again. Discharged on the 32nd day.

No. XXVII.—The patient was admitted for a first attack of rheumatic fever attended by pericarditis. On the second day after admission she was put under treatment, with 30 grains of salicylate of soda every two hours. The pains soon abated, and the temperature fell, but did not become normal until the third day of treatment.

Deafness and sickness set in soon after beginning the treatment, and were followed by noises in the head and transient albuminuria. Discharged on the 32nd day.

XXVIII.—The patient was admitted for a first attack of mild rheumatic fever attended by pericarditis. The day after admission 15 grains of salicylate of soda were ordered to be taken every two hours. The temperature fell to the normal standard in twenty-four hours, and the pains disappeared next day.

Sickness and vertigo set in on the third day after commencing the salicylate, rendering it necessary to discontinue it. Discharged on the 19th day.

XXIX.—Patient was admitted for a second attack of rheumatic fever. On the day of admission she was ordered to take 30 grains of salicylate of soda every eight hours. The temperature fell, and the pains were relieved at once, but the temperature did not become normal nor the pains entirely subside, and a recrudescence took place on the fifth day, which did not yield to more frequent doses of salicylate.

Deafness and discomfort in the head then supervened, and quinine was substituted for the salicylate of soda. Discharged on the 22nd day.

No. XXX.—The patient was admitted for a fully developed attack of rheumatic fever, with slight albuminuria. On the day after admission he was put upon 10 grains of salicylate of soda every four hours. The temperature fell very gradually, and became normal on the fourth day of the treatment. The pains did not subside until the seventh day, when the medicine had been increased to a dose every two hours.

An endocardial murmur developed after the commencement of the medicine, and delirium, deafness, and vertigo subsequently supervened; the action of the heart also became very irregular and feeble, requiring the free administration of brandy. Discharged convalescent on the 36th day.

No. XXXI.—The patient was admitted for his third attack of rheumatic fever. The urine was albuminous, and pleurisy appeared next day. He was put upon 15-grain doses of salicylate of soda every three hours on the second day after admission. The temperature fell somewhat and the pains abated on the second day; but as his state did not materially improve quinine was substituted for the salicylate after four days' trial.

Deafness, wandering, extreme frontal headache, and noises in the ears followed the use of the salicylate. Discharged convalescent on the 48th day.

No. XXXII.—The patient was admitted for a severe primary attack of rheumatic fever. The day after admission he was placed upon 30 grains of salicylate of soda every two hours. Pericarditis had already manifested itself.

Depression, deafness, sickness, and great weakness of the pulse and first sound of the heart followed the administration

of the salicylate, rendering it necessary to discontinue its use after the fifth dose, before either the temperature had been materially lowered or the pains relieved. Discharged well on the 50th day.

No. XXXIII.—The patient, who had been subject to bronchitis, was admitted for a second attack of rheumatic fever. She was placed upon 15 grains of salicylate of soda every four hours on the day after admission. The temperature and pains did not subside for several days, and pneumonia supervened whilst she was under treatment. When the salicylate had been discontinued for 17 days a relapse occurred, for which it was again prescribed, but the pains subsided very slowly.

Deafness followed the first administration of the salicylate, and deafness and hallucinations the second. Discharged on the 66th day.

No. XXXIV.—The patient was admitted for a fourth attack of rheumatic fever. Pericarditis, and subsequently pneumonia, were developed after admission. The treatment with salicylate of soda was not commenced until the sixth day after admission, and then in doses of 30 grains every two hours. The temperature fell almost at once, and the pains left within thirty hours. Two days after the discontinuance of the treatment the pains recurred, and the temperature again rose. The medicine was resumed in the former doses, and again the pulse, temperature, and pains subsided. The omission of the salicylate on this second occasion was likewise followed by a relapse, for which the medicine was once more prescribed.

Deafness followed the use of the salicylate on each of these occasions. Discharged on the 46th day.

No. XXXV.—The patient was admitted for a primary attack of rheumatic fever and pericarditis. He was ordered to take 15 grains of salicylate of soda every two hours on the day after his admission. The temperature became subnormal, and the pains diminished within a few hours, but deafness and persistent sickness compelled the intermission of the treatment at the end of 48 hours. Swelling of the affected joints continued, even after the pains had almost gone, and 14 days after leaving off the medicine fever reappeared, followed next day by a recurrence of pains in the joints. Salicylate of soda was again prescribed, and again the temperature quickly fell, but the pains more slowly. Sickness returned with the resumption of the medicine, and persisted until the latter was discontinued.

Deafness and violent sickness followed the employment of salicylate of soda on each occasion. Discharged on the 35th day.

No. XXXVI.—The patient was admitted for a second attack of rheumatic fever complicated with pericarditis. On the third day after admission, he was ordered 10 grains of salicylate of soda every two hours. The temperature fell at once, and the pains and swelling of the joints subsided. A week after the salicylate had been discontinued there was a return of fever with swelling and pains in the joints. The salicylate was recommenced, and this relapse was likewise soon relieved. Discharged on the 32nd day.

No. XXXVII.—The patient was admitted for her second attack of rheumatic fever about the 8th day of her illness; pericarditis and old mitral disease were present on admission. She was placed under treatment with 15 grains of salicylate of soda every three hours on the day of admission. The temperature subsided and the pains abated, but not entirely, and when, on account of its physiological consequences, the salicylate was reduced in quantity on the third day, the temperature rose again in a few hours, and remained of febrile height for some days. After this recrudescence had passed away the medicine was entirely discontinued, and three days afterwards there was a severe relapse. The salicylate was again prescribed in smaller doses, and after a few days the temperature and pain subsided permanently.

Deafness and noises in the ears supervened on the second day after beginning the treatment, and were soon followed by hallucinations, sickness, vertigo, and headache. Discharged on the 61st day.

No. XXXVIII.—The patient was admitted on the third day of a first attack of rheumatic fever complicated with pericarditis. Salicylate of soda in doses of 10 grains, every three hours, was ordered on the day of admission. The temperature and pulse were reduced and the pains abated in a few days. The omission of the medicine on the seventh day was followed in a couple of days by a relapse, for which salicylate was again prescribed. The symptoms slowly subsided, and the patient was discharged on the fifty-seventh day. The only unpleasant effect of the salicylate observed was weakness of pulse, for which brandy was given.

No. XXXIX.—The patient was admitted for a second attack of rheumatic fever complicated with pericarditis. He was put under treatment, with 15 grains of salicylate of soda,

every three hours, on the day of admission. Pleurisy developed after the medicine had produced great weakening of the first sound of the heart. The medicine was intermitted for a few hours on the second day, but resumed again next morning. The temperature varied greatly, but remained very much above the normal until the seventh day of treatment, when both pulse and temperature fell and the pains subsided. The salicylate was discontinued on account of its serious constitutional effects on the twelfth day. Next day the temperature again rose and pains reappeared in the joints. The salicylate was now again prescribed in 15 grain doses every four hours; but it had little influence on either the pains or the temperature for twelve days, and the temperature did not become normal, or the pains altogether disappear, until the fourteenth day. Again when the salicylate was omitted, a relapse took place, and the medicine was again prescribed, and on this occasion seemed to act more quickly.

Within a few hours of commencing the use of the salicylate the first sound of the heart became almost inaudible. This was followed next day by wandering, excited manner, and injected conjunctivæ. Reduplication of the second sound of the heart was noted in this as in several other patients. At a later period repeated attacks of epistaxis, and ultimately vomiting, supervened. Discharged about the 64th day.

No. XL.—The patient was admitted for a primary attack of rheumatic fever on the third day of his illness. Pericarditis developed the day after his admission. On the third day he was put upon 15 grains of salicylate of soda every two hours. The temperature fell rapidly and became normal on the third day, when also the patient was almost free from pain. The pains and slight fever relapsed when the salicylate was discontinued. It was then resumed, but its influence on the pains appeared only slight.

Deafness, epistaxis, and depression of the circulation followed the use of the medicine. Discharged on the 63rd day.

No. XLI.—The patient was admitted for an attack of rheumatic fever, with pericarditis. The day after admission he was put upon 15 grains of salicylate of soda every three hours. The temperature and pains soon subsided, but the day after the salicylate was omitted he suffered a severe relapse, for which the treatment was resumed. After taking

the medicine on this occasion for ten days, it was again discontinued on account of the severe constitutional effects which it caused, and a second relapse took place, for which, however, the salicylate was not prescribed.

Wandering, restlessness, and deafness supervened within a few hours of beginning the treatment. On the sixth day vomiting set in so persistently that it became necessary to stop the treatment. When resumed intense headache again compelled us to discontinue the salicylate. Discharged on the 69th day.

No. XLII.—The patient was admitted for a first attack of rheumatic fever. The special treatment was not commenced until the fourth day, when 30 grains of salicylate of soda were ordered to be taken every two hours. The temperature became almost normal, and the pains ceased on the second day of treatment, coincidently with the development of some of the constitutional effects of the medicine. It was then discontinued, but a relapse took place, and the treatment was resumed on the second day after it had been intermitted. The temperature now again fell within forty-eight hours, but the pains disappeared more slowly.

Delirium, deafness, headache, and epistaxis commenced the second day after beginning the salicylate. These were followed by sickness. The deafness, accompanied by severe retchings, restlessness, tremor of hands, and dryness of the fauces, returned when the treatment was resumed. Discharged on the 39th day.

No. XLIII.—The patient was admitted for his fourth attack of rheumatic fever, attended by pericarditis. He was placed under treatment, with 15 grains of salicylate of soda every four hours, on the day of admission. The temperature and pulse fell to the normal standard on the third day, and the pains ceased shortly afterwards. The salicylate was discontinued on the ninth day. Two days afterwards he suffered a relapse, for which salicylate was again prescribed. The temperature and pulse again became normal in three days, but the medicine was again discontinued, on account of its constitutional effects, on the seventh day. A few days afterwards a second relapse occurred, and was after a time treated with salicylate, which again rapidly brought down the temperature, and the pains subsided. A third relapse took place under similar circumstances, for which recourse was again had to salicylate, and, lastly, a fourth relapse occurred, for which the salicylate was not prescribed.

Albumen was found in the urine the day after the treatment was commenced, but it cannot with certainty be attributed to the salicylate, as the urine had not been examined previously. Its presence was only transient, for two days afterwards it had disappeared. Sickness followed the second administration of the salicylate in this patient, but with this exception, the constitutional effects of the medicine were not so marked as usual. Discharged on the 79th day.

No. XLIV.—The patient was admitted for a relapse of his second attack of rheumatic fever. There was already pericarditis and also old-standing disease of the aortic valves and hypertrophy of heart. He was put under treatment with 15 grains of salicylate of soda every four hours, on the fourth day after admission. The temperature fell within a few hours. Two days after discontinuing the medicine the temperature and pulse again rose and pains in the joints and sweating recommenced. Salicylate of soda was again prescribed, and again the temperature and pains rapidly abated. Two subsequent slight relapses occurred when the salicylate had been finally discontinued.

The use of the medicine produced vertigo and severe headache. Discharged on the 100th day.

No. XLV.—The patient was admitted for a second attack of rheumatic fever with old mitral stenosis. On the third day after admission she was placed on 15 grains of salicylate of soda every four hours. The temperature and pulse became normal within twenty-four hours, and the pains rapidly abated. The treatment was discontinued on the third day on account of the severe constitutional effects of the salicylate, and three days afterwards the fever and pains relapsed. Salicylate was again prescribed and the pains again abated, and the temperature and pulse became normal on the third day and remained so until the treatment was again intermitted after having been continued for nine days. Once more the disease relapsed, and once again the salicylate was prescribed with the same effect as on former occasions.

Deafness, vertigo, and tinnitus aurium followed the administration of the salicylate on the second day, leading to its being omitted the first time. Sickness, deafness, and weakness of pulse and of the heart rendered it necessary to intermit the treatment on the second occasion, and similar symptoms followed the third use of the medicine. Discharged on the 50th day.

No. XLVI.—The patient was admitted for her second attack of rheumatic fever. On the day after admission she commenced taking 30 grains of salicylate of soda every two hours for four consecutive doses. Pericardial friction was audible the day after admission. The temperature and pulse became normal, and the pains were greatly relieved on the third day. A diminution of the salicylate to three doses in the day was followed by a slight rise of temperature and increase of pains in some of the joints. The medicine was then given in doses of 15 grains every two hours. The temperature again fell, but the pains continued severe for several days longer. The salicylate having been reduced to a dose every three hours on the ninth day, was discontinued on the twenty-second day. On the following day the pains returned and the temperature and pulse became febrile. The medicine was now again prescribed, with the former result, but on being discontinued on the fourth day, in consequence of severe headache, there was a third relapse.

Headache, vertigo, and deafness followed the first employment of the medicine, which was notwithstanding continued until an attack of diarrhœa supervened. Sickness and diarrhœa followed the second administration of the salicylate, and very severe headache the third. Discharged prematurely at her own request on the 64th day.

No. XLVII.—The patient was admitted for a first attack of rheumatic fever. He was put upon 15 grains of salicylate of soda every two hours on the fourth day after admission. The temperature and pulse became normal on the second day, and the pains very soon abated greatly. The medicine was continued for fourteen days. Twelve days after its discontinuance there was a severe relapse, for which salicylate was again prescribed, and again the temperature fell and the pains disappeared. The treatment was now discontinued after five days, on account of persistent vomiting, and a second relapse took place, for which salicylate of soda was once more prescribed. A third slight relapse supervened, when the medicine was discontinued for the third time, which passed off without special treatment.

The use of the salicylate was followed on the second day by deafness and nausea, and next day by sore throat, vertigo, and buzzing in the ears. A few days later diarrhœa and vomiting set in, and tincture of opium was added to the medicine in order to restrain them. Persistent sickness compelled the medicine to be discontinued on the second and third occasions. Discharged on the 60th day.

No. XLVIII.—The patient was admitted for a second attack of rheumatic fever. On the third day after admission 15 grain doses of salicylate of soda were ordered to be taken every two hours. Albuminuria and pleurisy developed after the medicine was prescribed. The temperature fell slowly and did not become normal until the fifth day, and the pains disappeared about the same time. The treatment was continued for eleven days. Three days after it was intermitted pains and fever recurred, which were again treated with salicylate of soda. It was on this occasion omitted on the sixth day, and a few days afterwards there was a third relapse, for which the medicine was again prescribed. Delirium occurred soon after the salicylate was commenced, and on the eleventh day the mouth became aphthous. Discharged on the 72nd day.

No. XLIX.—The patient was admitted for a first attack of rheumatic fever accompanied by bronchitis. On the day of admission she was placed upon 15 grains of salicylate of soda every three hours, increased to every two hours on the next day. The temperature did not fall to the normal height until the fourth day, when the pains also had abated. Some of the constitutional effects of the medicine having now become developed, the dose was ordered to be given only every four hours, and a few days later the temperature again rose and the pains returned. There was now likewise pleurisy with effusion. An increase of the salicylate again brought down the temperature in a few days and the pains subsided, but, so soon as the medicine was again decreased in quantity, the pains and temperature once again increased.

Deafness soon followed the first administration of the salicylate. Discharged on the 56th day.

No. L.—The patient was admitted for a first attack of rheumatic fever and pericarditis. On the second day after admission she was put upon 15 grains of salicylate of soda every three hours. The temperature and pain were soon influenced by the medicine, and she was quite comfortable on the fourth day. The salicylate was omitted on the seventh day, and next day a relapse set in for which salicylate of soda was again prescribed. Reduction of temperature and subsidence of pain soon ensued, and the salicylate was again discontinued on the 15th day. Three subsequent relapses occurred, for each of which salicylate of soda was prescribed.

The first sound of the heart became very indistinct, and deafness and noises in the ears supervened on the second day

after beginning the treatment. A little later the pulse became very irregular both in force and rhythm and the tongue much injected. Discharged prematurely, at her own request, on the 87th day.

Remarks.—I have already, in a previous communication, stated the results of my experience in the treatment of rheumatic fever with salicin. A perusal of the foregoing cases shows that the effects produced by salicylate of soda are almost identical with those produced by salicin, save that the former is by far the more energetic of these agents. The study of the cases treated with salicylate of soda suggests two points for consideration which come properly within the scope of this Paper: namely, first, the physiological effects of the medicine; second, its value in the treatment of rheumatic fever.

I.—The physiological effects of salicylate of soda.

One of the most obvious effects of the treatment in the majority of cases was a speedy fall of temperature, sometimes within a few hours from the commencement of the treatment, and for the most part within two or three days. The pulse usually, but not quite invariably, came down in frequency with the fall of temperature. Certain well-marked symptoms commonly attended the reduction of the fever. In several cases of so mild a character that I should have expected them to make a rapid recovery under the favourable conditions of confinement to bed, quietude, and hospital diet, the improvement was so rapid that time was not allowed for the development of these physiological consequences of the medicine. Nevertheless, in forty-five cases out of the fifty I have recorded, such effects did more or less ensue. These effects may be considered under the heads of affections of the nervous system, of the organs of circulation, and of the gastro-intestinal tract.

To the first group, affections of the nervous system, belong deafness, vertigo, headache, noises in the ears, delirium, and hallucinations.

Deafness was often an early result of the treatment, and was noticed in twenty-seven cases; sometimes it was very intense. Vertigo was also frequent, and occurred in fourteen cases. Noises in the ears, often accompanying deafness or vertigo, were complained of in eleven cases. They were described as being like the noise of a steam-hammer, the rushing of water, or as buzzing or singing in the ears. Very intense headache, chiefly frontal, though less frequent than deafness

and vertigo, was, when it occurred, a much more distressing symptom. It was complained of in nine cases, and in several of them recurred on the resumption of the medicine after it had been temporarily discontinued. Delirium was present in eight cases, and was usually attended by great restlessness. Hallucinations presented themselves in four or five cases. The delusions were of the same kind in all of them, and consisted in the supposed presence of objects or persons around the bed or in the immediate vicinity of the patient. In several cases they were associated with the impression that distant music was heard.

Marked depression of the pulse and action of the heart were the most important of the consequences produced upon the circulation. More or less weakening of the pulse, requiring the free administration of stimulants, occurred in nearly every case. This was accompanied by great weakening of the impulse of the heart, and in ten cases by almost complete obliteration of the first sound. In two or three cases irregularity of pulse appeared fairly referable to the treatment; in several cases the pulse became dichrotous, and in four or five cases the second sound of the heart became reduplicated.

The symptoms referable to the gastro-intestinal tract were sickness—often uncontrollable sickness—which happened in twenty-two cases. In three of these cases the vomit was grumous. In many cases there was marked injection of the tongue. Soreness of the fauces, apparently arising from the treatment, occurred in three cases, and an aphthous state of the tongue also in three other cases. In one of the latter several small vesicles formed upon the tongue and buccal mucous membrane. Diarrhœa also occurred in two cases, and was evidently due to the treatment, for it subsided when the medicine was discontinued, and returned again when it was subsequently resumed.

Epistaxis occurred in seven cases—in some of them repeatedly—and in more than one of them, after ceasing when the medicine was intermitted, it returned again when it was resumed. Transient albuminuria was observed in two cases, and in two other cases tremor of the hands and tongue, but it is not quite certain that these were really results of the salicylate of soda.

II.—The value of salicylate of soda in the treatment of rheumatic fever.

My experience leads me to regard salicylate of soda as

the most powerful antipyretic agent with which I am acquainted. As I have already shown, the temperature soon falls under its use; the pulse commonly falls at the same time, and the pains also usually soon abate very considerably, and in most cases entirely cease within a few days. If this were all, and there were no drawbacks to recount, the value of this medicine in the treatment of rheumatic fever would be unquestionable. The improvement of the symptoms, however, only takes place coincidently with the development of one or more of the physiological phenomena already described; and, in all the more acute cases, the relief produced by the medicine soon passed away when the treatment was intermitted, and a relapse—in many cases several relapses—took place. On this ground I cannot regard salicylate of soda as a specific in the treatment of rheumatic fever.

Relapses occurred in twenty-one cases; but in estimating the comparative frequency of their occurrence, several cases ought to be excluded from the calculation. As I have already said, the cases were of very various degrees of intensity and character. Several belonged to that mild form of rheumatic fever which soon subsides, after the patient is admitted into hospital, irrespective of any special treatment. To this class belonged twelve cases (Nos. XI., XII., XIII., XIV., XV., XVIII., XX., XXII., XXIII., XXIV., XXVI., and XXVIII.). In several of these cases the temperature had already fallen before the treatment with salicylate of soda was commenced, whilst in others it became normal about the second or third day after admission and within a very few hours after the salicylate had been prescribed. Then the two cases (Nos. I. and II.) which passed into the state of hyperpyrexia whilst under the influence of salicylate of soda; the two fatal cases (Nos. III. and IV.); and lastly two other cases (Nos. XXXI. and XXXII.) in which the salicylate was discontinued after a very short trial; in one because it failed to produce any decided benefit, in the other on account of the severe constitutional effects it caused, ought likewise to be omitted. Excluding these eighteen cases there were therefore relapses in twenty-one out of the remaining thirty-two cases. In seven of these cases there was only one relapse; in nine there were two, in two there were three, in two there were four, and in other two there were five relapses. It is, indeed, unquestionable that relapses are apt to happen in rheumatic fever, under every mode of treatment; but certainly in not so large

a proportion as in twenty-one out of thirty-two cases. It was also quite obvious that, in most of these cases, the relapse was due to the influence of the medicine passing off; because in most instances the relapse took place shortly after its physiological effects had ceased, and, in those cases in which more than one relapse occurred, the later relapses happened in precisely similar circumstances.

Whilst, therefore, we must freely admit the great immediate relief that in many cases follows the employment of salicylate of soda in the treatment of rheumatic fever, there still remains for consideration the question whether, upon the whole, this treatment is successful. The answer to this question must depend upon: 1st. whether the complications which are apt to arise in the course of rheumatic fever are less frequent under this mode of treatment; 2nd. whether the condition of the patient after recovery is better or worse than under other modes of treatment; and, lastly, whether the length of time in hospital is longer or shorter under this than other modes of treatment.

1st.—We might perhaps have expected that hyperpyrexia, at least, would have been prevented by the use of so powerful an antipyretic agent. But the two first cases I have recorded negative this expectation, for hyperpyrexia was developed in both of them after the proper physiological effects of the salicylate of soda had become manifest. Pericarditis was already present in many cases before the special treatment was commenced; but it also supervened subsequently in several cases. In three cases pneumonia, and in four others pleurisy, supervened when the constitutional effects of the salicylate had become manifest. On the other hand, several cases that were admitted with either pleuro-pneumonia, broncho-pneumonia, or bronchitis ran very much the same course we are accustomed to see similar cases run under other modes of treatment. It thus appears that treatment with salicylate of soda neither prevents nor diminishes the frequency of complications in rheumatic fever.

2nd.—Patients treated with salicylate of soda become very anæmic; they are long in becoming able to resume their ordinary occupations, and they appeared to me to regain health and strength more slowly than patients treated in other modes.

3rd.—If the two cases of hyperpyrexia, the two fatal cases and nine of the very mild cases, which were each on the

average less than twenty days in hospital, be left out of account, it appears that the remaining thirty-seven cases were each on an average fifty-seven days in hospital. This period, however, by no means represents the duration of their disabling illness, for all of them had been at least a few days ill previous to admission, and probably none was discharged in a condition to resume work; many having been sent to convalescent hospitals and others to their friends in the country to recruit. On an impartial consideration of my experience, therefore, I am compelled to conclude that, although the pain and distress of the patient are undoubtedly assuaged, for a time, by salicylate of soda, the duration of his illness is not shortened, neither is his recovery so rapid as under other modes of treatment.

In conclusion, another question now presents itself for consideration, namely, whether it is not possible that some injurious consequence may result from the powerful action of the medicine upon the heart; and, I am bound to express my fears that the marked weakening of the first sound of the heart, observed in so many cases, indicates the exertion of an influence upon the muscular structure of that organ which may not always pass entirely away when the treatment is suspended, more particularly where inflammation of either the endocardium or pericardium or of the muscular structure itself exists during the treatment.

LIV.—*A Case of Acute Hysterical Vomiting of ten months' duration, caused by Displacement of the Uterus.*

By Graily Hewitt, M.D. *Read May* 28, 1880.

THE case now submitted to the Society is one which offers many points for consideration. I regard it as a typical but very extreme instance of an affection very common in gynæcological practice.

That there is a very intimate relation between the stomach and the uterus is well known. It seems to me probable, from the facts which from time to time come under my notice, that the uterine source of many cases of obstinate and troublesome nausea and vomiting is too often unrecognised, and that patients are not seldom treated for disease of the stomach when the uterus is really at fault.

The subject of this case was a young lady aged 20, who

came under my notice in December 1879, as a patient of the All Saints' Institution, in Gower Street. The general history of the case was as follows:—

She has always been accustomed to take a good deal of exercise, has led a very active life, but has not taken for some years what would be considered an average quantity of food; the reason for which has been a general disinclination for it, coupled apparently with the existence of a notion on her part that she did not require much. For the last two or three years she has been in the habit of playing lawn-tennis a good deal, and has done duty in playing the harmonium at a place of worship.

Menstruation has never been regular. There have been occasional intervals of two months, but at times the periods have occurred too often and too profusely. There has been a complete cessation of menstruation for the last ten months, since which time she has been ill.

Present illness.—The patient has been ill for ten months. Since February 1879 she has suffered from obstinate sickness, which, at first not very severe, gradually became worse and worse. She has not been able to retain food in the stomach in the ordinary way for the whole of this period. Of late the sickness has become even more severe. She has now for some little time been able to retain only koumiss in small quantities at a time, the smallest particle of any solid food being rejected at once.

She has become excessively emaciated. Her weight a year ago was 10 stone. It is now stated to be 5 or 5½ stone only. Her weakness is extreme. She has been unable to sleep, and her general condition is deplorable. Any attempt to walk about and take exercise has been attended with aggravation of the symptoms. Menstruation has not occurred for ten months, as already observed. It was, I believe, conjectured by her previous medical attendant that she was suffering from some uterine displacement.

Condition on admission (December 19, 1879).—Patient constantly sick; skin moist; there is a commencing bedsore over sacrum. Bowels open, micturition frequent. Pulse exceedingly feeble. Examination of the pelvis and its contents showed that the uterus was very low down in the pelvis, much swollen, and in a condition of acute anteversion, with some considerable amount of anteflexion. The uterus seemed very wide from side to side, owing to the general engorgement.

It was decided that the sickness was due to the condition of the uterus. In regard to the cause of the displacement and distortion the patient did not at the time mention it, but a few weeks later she informed me that in the month of February, 1879, she one day jumped from the top of some seats in a schoolroom, six feet in height, to the floor. Another young lady who was with her at the time performed the same feat. They were both of them made sick by the effort. The other young lady went to bed for six weeks, feeling ill, and having, as she thought, a cold. This patient took no notice of the effects of the leap, and had, in fact, forgotten it. But the sickness appears to have set in at precisely this time; and there seems little doubt that the leap was responsible for the mischief.

For the first week the treatment adopted was as follows: Nutrient enemata of beef-tea, with a small quantity of brandy and a few drops of laudanum, were administered three times a day. The patient was ordered to take only a little koumiss by the mouth. Once every hour during the day she was placed in the knee-and-elbow position for two or three minutes, in order to raise the uterus from its too low position.

At the beginning of the second week she had much improved; the sickness was less, but the patient extremely irritable, no sleep except for very short space of time, complaint of great headache, and a condition of general unrest. The uterine sound was now used for first time, and by its means the uterus was raised and position of fundus changed.

The effect of the use of the sound was at first—for two days—to reproduce the sickness to some extent, but it then became mitigated. At the end of the second week condition was much improved, patient still taking nutrient enemata, and iced champagne by the mouth. Brand's essence of beef and some other food were now given, but with not much success, the stomach still rejecting the greater part of things administered, except the champagne. The koumiss was given up during second week.

Fourteen days after admission a small-sized ebonite cradle pessary, such as I am accustomed to employ for the treatment of anteflexion and anteversion, was introduced, and it has since remained undisturbed. During the third week food began to be tolerated by the stomach; at first Darby's peptone was given, mixed with a little water, in small doses, frequently. In three days, the patient tiring of this, gravy-

soup from a confectioner's was given, one, two, or three spoonfuls at a time; three to four glasses of champagne daily and about 1½ ounces of brandy, the latter with enemata; also biscuits in small quantity. The sickness entirely left her at the end of this, the third, week.

During the fourth week improvement very marked. She could now take meat in the solid state, and the enemata were given up. Power of sleep restored, condition changed for one of absolute tranquillity. The pulse, which on admission and during first two weeks sometimes was under 50 in the minute, now beat at 80. After the fourth week the patient's appetite became ravenous. It seemed impossible to give her enough; all kinds of food were equally agreeable to her—the anxiety when one meal was over was for the arrival of the next.

Six weeks after her admission the patient so earnestly begged to be allowed to get up that it was permitted. In a week she walked round the room a quarter of an hour at a time, feeling no ill effects whatever.

Seven weeks after admission the patient was convalescent and fit to leave the Institution. Her condition is now wonderfully altered for the better; the cheeks have filled out, and she has entirely lost the look of extreme illness. All kinds of food are taken, and in large quantities.

A week after leaving the institution the patient was weighed, and had gained 2 stone in weight. Six weeks afterwards menstruation returned, and the patient was reported perfectly well and in full enjoyment of an active life.

Remarks.—The case is, in my opinion, to be read in this manner: The patient was ill-nourished, weakly, and in a bad state of health before the actual illness began. The menstrual irregularities give evidence that the uterus was in a disturbed condition also. It is probable that its tissues were soft, wanting in resistance, and that it was somewhat displaced and altered in shape before the commencement of the severe illness.

The leap which occurred in February 1879 probably produced a sudden and considerable displacement of the fundus of the uterus downwards and forwards—acute anteversion and flexion; and from that time up to the period of admission the uterus remained in its displaced, distorted condition. A secondary result occurred, viz. a continuous congestion and engorgement, and consequent swelling, of the uterus. Menstruation was thus also suppressed.

The sickness was a reflex phenomenon due entirely to the irritation set up in the uterus. It completely disappeared when the uterus was restored to its proper shape and position. This restoration was effected by the use of the knee-and-elbow position, by the sound, and by the cradle pessary. There would have been no objection to the use of the cradle pessary at first, but it was thought best to employ other methods of raising the uterus during the first fortnight.

LV.—*A Case of acquired Hypertrophy of one Limb.*

By H. H. Clutton. *Read May* 28, 1880.

THE case which I have the honour of showing the Society this evening is one in which the right lower limb is longer and larger in every direction than the left.

A boy, æt. 11, came to my out-patient room in St. Thomas's Hospital in October last (1879), complaining that the whole of the right leg was swollen. He had first noticed this change two months previously, unaccompanied by any pain, but only a sense of weariness after any exertion. He also found that he was rather lame. His mother, an intelligent woman, is quite sure that previously there was no difference between the two limbs, and that he never was lame before. He has had no illness except scarlet fever at six years of age. This was not followed by any weakness of limb or lameness. At first sight, on comparing the two limbs side by side, without reference to the trunk, it seems as if the left were merely an atrophied limb such as might occur from infantile paralysis. There is, however, as I have already pointed out, no history of any such cause. On stripping the patient, so that he stands quite naked before you, it is at once evident that the left is, in proportion to the rest of the body, the normal limb, while the right seems too large. This is especially conspicuous on comparing the two sides of the body; the left arm and leg seem in natural proportion to one another, while the right leg seems too large for the corresponding arm; the two arms are evidently the same size. You will also notice as he stands that there is a slight lordosis and tilting of the pelvis.

The measurements of the two limbs taken for me by Mr. Acland, in October 1879, give the following results:—

Length.	Right.	Left.
From anterior superior sp. to ext. mall. .	29¼ in.	28¼ in.
From lower border of patella to int. mall. .	13½ in.	13 in.
From upper border of pat. to ant. sup. sp. .	14¾ in.	14⅛ in.

So that the right limb is longer than the left by 1 inch, of which the thigh and leg take about equal shares. The circumference shows a corresponding disproportion:—

Length.	Right.	Left.
Thigh, upper third	17½ in.	14⅓ in.
At upper border of patella . . .	12½ in.	11 in.
Calf	12 in.	9¾ in.

There is no difference in the measurements of the two upper extremities (Plate VI., Fig. 3).

The temperature of the two limbs has been frequently taken with the surface thermometer. The temperature of the right limb has been found to be always from 1 to 3 degrees higher than that of the left.

Dr. Kilner, electrician to St. Thomas's Hospital, has kindly examined the patient for me, and furnished me with a report, which shows that to the interrupted current they react equally and normally, but that the right leg has a slight tendency to become spasmodically convulsed. With the continued current both thighs and legs respond to equal currents, and the right also undergoes continual spasmodic contractions. The right always offers less resistance than the left. Irritation by rubbing skin decreases resistance more on the right than the left.

If this were a congenital case it would not be so remarkable as I believe it to be. Congenital cases have occasionally been recorded; and, although sufficiently rare to be always interesting, yet there are few who have not at times met with congenital deformities in which the whole or part of a limb was unnaturally developed in proportion to the rest of the body. But in this case I believe the deformity to be an acquired one; and if it be so it is an exceedingly rare instance.

Both the mother and the boy are most anxious to give correct information, and if their statements are not accepted one must believe they have been themselves deceived. But this one can hardly conceive possible on looking at the two limbs; and the fact that he has only lately become lame corroborates their statements. I think, then, one must believe it to be an acquired deformity—a case of simple

hypertrophy of the whole limb. The muscles alone are not enlarged, as in pseudo-hypertrophic paralysis, but every structure entering into the formation of the limb seems to have gone a stage further in its development than the rest of the body, the bones showing a decided increase in size on the right over those of the left, as tested by calipers. The limb itself seems to possess its normal relative proportions when viewed alone, but, considered with reference to the rest of the body, it certainly appears abnormally large.

I have no explanations to offer, but simply lay the case before this Society for their consideration. It will be of great interest to note whether this increased rapidity of growth on the part of one limb over the rest continues as the boy develops. He is now only eleven years of age. I shall hope to bring him again before this Society should any change occur.

Report of Sub-Committee on Mr. Clutton's Case.

After making a careful examination of Mr. Clutton's patient we are able to confirm his report of the features of the case in all particulars, and we agree with him in regarding it as an example of enlargement of the right lower extremity. Whether, however, the enlargement is due to a congenital tendency which has gradually produced hypertrophy, or whether the enlargement is as recent as the mother believes, we are unable to say, the evidence on this point not being sufficient to warrant any positive conclusion.

(Signed) Thomas Bryant.
H. H. Clutton.
Howard Marsh.

LVI.—*Two Cases of Disease of the Mastoid Bone, in one of which a severe attack of Herpes of the Face followed Thrombosis of the Lateral Sinus and Jugular Vein.* By Henry Morris. *Read May* 28, 1880.

THE object of the following communication is (1) to point out the value of trephining the mastoid bone, as a palliative measure, even when recovery is not possible; (2) to show the value of a simple incision through the soft tissues over the mastoid as a curative measure in cases of periostitis of that bone; and (3) to put on record a case in which a

severe attack of herpes of the face and mouth was associated with thrombosis of the lateral sinus and internal jugular vein.

Case I.

Otitis Media. Suppuration of the Tympanum and Mastoid cells, with Caries of the Petrous bone, followed by Thrombosis of the lateral Sinus and Jugular Vein, and suppuration between the Dura Mater and bone. Trephining the Mastoid. Extensive Herpes of the Face and Mouth. Death from Pyæmia.

Alfred S., æt. 31, single, was admitted, under my care, into the Middlesex Hospital on the afternoon of November 14, 1879. When 9 years old he had scarlatina, which left him almost deaf on the left side, and with a slight discharge from the left ear. Both deafness and discharge were worse sometimes than at others. Ten years ago he had syphilis, and three years ago gonorrhœa; a little later and all the hair of his face and head came off. About this time too he had what he called 'rheumatic fever affecting his head.'

For the last four years he suffered at times from severe pain at the back of his head. Quite lately he has been a total abstainer, and for this reason, that whenever he took a glass or two of beer a deep red fleeting rash appeared on his face and neck. For many years he had been subject to this annoyance in a slighter degree. Ten days before admission he took a hot bath, and in a day or two afterwards was seized with rigors and intense pain at the back and left side of his head, together with a feeling of general malaise. The discharge from the left ear became very offensive, but was not profuse. A few days later the pain concentrated itself behind the left ear, and the discharge from the ear was diminished for a day or two. *On admission* there was a profuse discharge of pus from the meatus; there was intense pain, with some swelling and redness, over the left mastoid region; and acute tenderness on pressure over the squamous as well as the mastoid portion of the temporal bone. His expression was anxious, his pulse very feeble, and his tongue dry and brown in the centre. An attempt was made to examine the tympanum, but this was impossible. He had not been convulsed, did not appear drowsy, had no facial paralysis, and no affection of the eyes. Whilst in the waiting-room of the hospital he had a severe rigor. Hot fomentations, frequently changed and sprinkled

with opium, were applied to the left side of the head and neck. He continued in much the same state, and without any alleviation of the pain, up to 6 P.M. on November 16, when—whilst in the half-sitting position during the application of a fresh fomentation—he suddenly seemed to lose all power over himself, and within a very few minutes was breathing stertorously. I saw him two hours afterwards, breathing with loud stertor, although the rate of his respirations was normal, and with a pulse so feeble and rapid that it could not be counted. Although partly comatose he could be roused and made to answer to his name. He seemed to be in pain when moved or disturbed. There was no paralysis. Over the left mastoid there was now a soft elastic spot, and into this, the patient being under chloroform, I made a straight vertical incision one inch long directly down upon the bone. A free escape of venous blood was all that followed until the periosteum backwards from the line of incision was raised, when about three-quarters of a teaspoonful of thick and very stinking pus flowed away. A small carious point at the back of the mastoid was seen, and into this a small drill was introduced, and a little more pus escaped. Within a few seconds afterwards his pulse improved markedly, and could now be easily counted 108 in the minute; stertor ceased, and he fell into a quiet sleep, which continued till 3 A.M. in the morning. On waking he knew his friends, was quite free from pain, recollected all that had occurred up to the time of his fit, and answered questions clearly, though slowly and with some hesitation.

On November 17 he said he felt much better than he had done for many days, was quite free from pain, and anxious about his chances of recovery. But pyæmia had already too clearly set in. He had had another rigor. His temperature was very fluctuating, being sometimes 103°, and in an hour or two afterwards below normal; his pulse was 124 and small, respirations 44, and laboured, and he had a short hacking cough, attended with muco-purulent expectoration. He complained too of feeling cold, had a good deal of hiccough and frequent diarrhœa (the stools being slightly blood-stained before death); his tongue was red and dry in the centre, and thickly furred at the edges, and his throat was coated with tenacious glairy mucus.

It is needless to follow the daily report of the symptoms till his death, on November 27. There is one feature, however, which requires further notice, as it gives this case its

special peculiarity. On November 19, three days after the operation, a few herpetic vesicles were noticed on the right side of the lips and on the centre of the right cheek. The next day the rash had spread thickly over the right half of the face, and a linear patch of the eruption extended outwards from the left angle of the mouth, the vesicles being thickest and largest on the centre of the right cheek and on the right side of the nose.

The left temporal artery was very prominent, pulsating much more strongly than the right. There was marked fulness of the frontal veins, especially the left. The conjunctivæ were swelled. On November 21 twitchings of the facial muscles were noticed, and continued for half an hour, and were followed by such a marked change of countenance that he was thought to be dying; afterwards he was very drowsy for many hours. Twelve hours later the rash was much thicker, and he complained of his throat being so sore that he could scarcely swallow. The mucous membranes of the mouth and tongue were deeply congested, and covered with a herpes-like eruption.

On November 22 much of the eruption had scabbed over, but a fresh crop had appeared on the left upper eyelid, and what could be seen of his face was constantly flushing. On November 23 the eruption spread more widely over the left side of the face; on the right side it was quite confluent. A thick blood-stained scab covered the left eyelid. The throat, mouth, and tongue were coated with a quantity of sordes. In this state his face and mouth continued till his death, on November 27.

The post-mortem examination was made, twenty-four hours after death, by Dr. Coupland and Mr. Sutton. The following is an abstract from Dr. Coupland's report:—

Both sides of the face, the lips, eyelids, and nose were covered by a profuse eruption of desiccated vesicles and dried blood—the remains of herpes. There was a thin clot in the longitudinal sinus, a soft black coagulum in the right lateral sinus, in the torcular herophili, and extending a short distance into the left lateral sinus. About one inch from the torcular the left sinus was plugged with a firmly adherent discoloured clot, the central part of which had broken down. The dura mater about this spot was much thickened, detached, and its outer surface discoloured. The bone forming the groove of the lateral sinus was of a greyish-black colour, but no line of demarcation marked it off from the surround-

ing healthy bone. The bone behind the groove was perforated by a drill-hole the size of a small quill at a point corresponding externally with the root of the mastoid process. The plugging of the sinus and the thickening of its walls extended throughout the rest of its length, and the left jugular vein also had its walls thickened and its cavity filled by an adherent discoloured thrombus, which formed a tolerably thick layer to the vessel along its whole length, a central canal filled with puriform material being left in the thrombus. At the point of junction with the left subclavian a tongue of recent black coagulum projected from the mouth of the jugular vein. The lymphatic glands in the neck were swollen and vascular, and adherent to the jugular vein. The pia mater was full of blood, the veins of each side being equally engorged. There was no discoloration of the left temporo-sphenoidal lobe; perhaps there was slight pitting of the outer surface of the left hemisphere of the cerebellum, but there was no softening, and no abscess in any part of the brain. The right pleural cavity contained upwards of a pint of seropurulent fluid. Both visceral and parietal layers of pleura were coated with lymph. The lower and middle lobes of the lung were compressed. In the middle lobe, near its lower border, a small abscess, the size of a walnut, projected, surrounded by a zone of red hepatization. Another similar infarction, but not yet suppurating, presented at the surface near the upper margin of the lower lobe. These were the only pyæmic foci found in either lung; both lungs were much engorged, and their bronchi were filled with secretion. The intestines contained much semi-fluid fæcal matter; patches of bright red congestion and of capillary ecchymosis, chiefly along the lines of the valvulæ conniventes, occurred here and there. The tympanic membrane was deficient in its upper half, and the tympanic cavity as well as the external meatus were filled with pus. The lining membrane of the tympanum was thickened. The auditory ossicles were intact. The posterior wall of the tympanum was wholly wanting, as were also the inner two-thirds of the posterior wall of the osseous canal. Thus the mastoid cells communicated both with the middle ear and with the external meatus; and further a carious opening in the posterior surface of the base of the petrous portion of the temporal bone, large enough to admit a probe, formed a communication through the mastoid cells, between both the tympanum and auditory meatus on the one side and the

groove for the lateral sinus on the other. The mastoid cells were plugged by a quantity of caseous material. The bone separating the tympanum from the middle fossa of the skull was extremely thin.

Remarks.—It is well known that otitis interna or media may excite thrombosis of the sinuses of the dura mater, as well as inflammation and abscess of the brain, by the extension of inflammation and clotting along the small veins which pass from the cavity of the tympanum and the mastoid cells to the lateral sinus; and this, too, without inducing either caries or necrosis of the petrous portion of the temporal bone. Such cases have been reported by Drs. Ogle, Brinton, and Dickinson in some of the earlier volume of the 'Pathological Society's Transactions.' In the present case, however, as much more commonly happens, the immediate cause of the thrombosis of the sinuses was the caries of the temporal bone.

The disease had advanced too far before the patient's admission into the hospital for any treatment to avail in saving life. Trephining, by providing for the free escape of pus, not only prolonged life and restored consciousness for some days, but added to these effects the alleviation of very great suffering. The mastoid cells were not penetrated by the drill, as the bone was pierced where it was seen to be carious at its surface, and where, as it proved, pus was in contact with its deep surface.

Although the tympanum had been diseased for many years the mastoid cells and the external auditory canal were the parts most affected; and the case gives support to Mr. Toynbee's view, that inflammation of these parts, in the adult, produces disease of the lateral sinus or cerebellum, and that when the lateral sinus is affected death follows from lobular pneumonia and pleurisy. Neither swelling nor tenderness marked the extension of the disease along the jugular vein, as they very frequently do; and, though the lymphatic glands about the cervical sheath were affected, they were not sufficiently enlarged to cause swelling during life.

The herpes was throughout most marked upon, and for a time limited to, the right side of the face. It was so severe and confluent that had the patient recovered the face must have been pitted as after small-pox. I attempted to explain this eruption on the hypothesis of active venous congestion in the following manner: If the left lateral sinus is obstructed, the blood would have to return in great measure

from the left side of the brain through the right jugular. The increased pressure upon the large stream flowing through the main channel would retard the escape of blood from the tributaries to the right jugular, and thus the face and fauces of the right side would become congested. As long as the thrombus did not extend far down the left jugular vein, venous blood would be able to pass freely through the left facial, lingual, and pharyngeal veins into the left internal jugular; but when once the thrombus had extended along the jugular to below its junction with the facial the blood from the left side of the face and mouth could only find an outlet through the veins of the opposite side, or through the facial communicating into the external jugular of its own side. Thus not only would the veins of the left side of the face and mouth become congested, but the congestion of the right side would be still more increased. There would be resistance also to the passage of blood through the internal carotid artery of the same side as, and as the result of, the thrombosis, and this would lead to increased tension in the external carotid and its branches, and thus to the more forcible pulsation of the left temporal artery. The stasis in the jugular vein and lateral sinus would doubtless cause compression on certain nerves, including the sympathetic, and this would lead to dilatation of the branches of the external carotid. If this hypothesis holds good for the eruption on the cutaneous surface, it would also for that on the inside of the mouth, as the blood from the buccal and labial mucous membrane, from the tonsil, soft palate, and tongue, passes into the internal jugular, either directly or through the common facial vein.

It must be admitted, however, that it would be very difficult to prove that the herpes was not excited by irritation of, or change in, the nerves of the face; for, owing to the mode of distribution of the fifth nerve, it is not possible either to trace the vesicles along any individual nerve-filaments, nor to say that they do not follow the course of special branches. But it will be noticed that, whilst the eruption occurred on parts of the skin supplied by branches of the third division of the fifth, it was absent from the area supplied by the auriculo-temporal branch of that division. This favours the hypothesis of venous congestion, because this is the area from which the blood flows at once into the external jugular vein, and therefore is throughout compara-

tively uninterfered with by the obstruction in the internal jugular vein.

Another explanation may be offered, by which the venous congestion and nerve influence would take part; the venous congestion being the immediate cause of the nerve interference, and the latter through its influence on the tissues of the herpetic eruption. Three of the branches of the fifth emerge upon the face, and several reach the mucous membrane of the mouth and the top of the pharynx, after passing through bony canals, and are thus liable to be compressed by their companion vessels if distended. In support of this view it will be observed that the parts of the face especially affected were those supplied by branches just after they have escaped from the infra-orbital and mental foramina; and that the auriculo-temporal, after leaving the trunk of the inferior maxillary division, reaches its destination without going through any canal or foramen.

Whichever explanation be thought most probable, one fact must be borne in mind, namely, that this particular patient had a great tendency to capillary congestion of the face and neck, as indicated by the temporary deep red rash which was always produced by taking stimulants. That something besides the occlusion of the internal jugular is requisite to give rise to herpes may be well surmised, from the fact that out of fifty-eight cases of wounds of that vein collected by Professor S. W. Gross, which were treated either by pressure or the ligature, there is no mention made of any similar occurrence. It may be thought that these cases (sixteen of which were treated by compression, and forty-two by ligature) would be less likely to be affected by any eruption due to congestion, because, it might be supposed, the amount of blood lost through the wound would prevent congestion and allow time for the circulation to adapt itself to the altered circumstances. But, as a matter of fact, the amount of blood lost in several of these cases was extremely small, and further, as in a case of my own, published in the 'Medico-Chirurgical Transactions,' vol. lxiii., the external jugular, as well as the internal, on the same side, was ligatured. There is no doubt, too, an important difference in the effects upon the circulation between a thrombus in, and extending from, the lateral sinus along the internal jugular, and ligation of the internal jugular vein in the middle or lower part of the neck. In the former case other sinuses are often also affected, and from the very commence-

ment the greater part of the strain of the venous circulation of the skull would be thrown upon the veins of the opposite side; while, at a later period, as the thrombus reaches lower and lower down, the greater part of the venous blood of the external parts of the skull would have to find its way into the veins of the unaffected side; whereas if a ligature be applied to the jugular the intra-cranial venous blood would find its way as usual out of the head, and, descending on its own side to the point of ligature, would be distributed partly to the external and anterior jugular, and partly through the anastomoses with the veins of the opposite side. Even if the external jugular has been ligatured as well as the internal there is such a free communication between the anterior and external jugulars that a good channel into the subclavian would be rapidly established. Admitting this difference, it becomes interesting to inquire next if any similar eruption has been noticed in cases in which the internal jugular has been occluded by extension of thrombus from the lateral sinus. With this view I have looked through a large number of cases of thrombosis of the cerebral veins and sinuses of the dura mater, but without finding any in which a cutaneous eruption is stated to have occurred. The only approach to any similar condition that I have met with is in the case of a boy aged eleven years, who, a few days before his death, became comatose, and had 'profuse sweats, limited to face, neck, and upper part of chest.' He was the subject of marasmic thrombosis of some of the superior and anterior cerebral veins, and of nearly the whole length of the superior longitudinal sinus; the left lateral sinus also containing a small coagulum. The case is described by Dr. M. E. Fritz, and is quoted by Dr. Lidell in the second of his exhaustive articles on cerebral thrombosis ('American Journal of Medical Sciences,' July 1874, p. 69).

It might be expected that if herpes of the face can occur, either directly or indirectly, as the result of venous congestion, that a very favourable condition would be provided in cases of obstruction of the superior vena cava, and where the brachio-cephalic veins and terminations of the jugulars and subclavians are blocked and converted into tough rigid solid cords. Yet in four typical cases, recorded by Dr. Owen Rees in the 'Guy's Hospital Reports,' 1861, nothing was noticed beyond congestion and œdema, and in one case slight facial paralysis. Œdema of the right eyelids and facial paralysis on the same side were observed also by Dr. Hubner in a

case of thrombosis of the longitudinal transverse and right cavernous sinus, and right ophthalmic vein (case lxx. in Lidell's article).

Case II.

Otitis Externa. Suppurative Periostitis of the Mastoid. Incision. Recovery.

At the end of July 1879 a gentleman, about fifty years of age, went to Whitby, and while there bathed once or twice in the sea, the water being very cold. The day after his last bathe he was attacked by earache, and had a sensation as if there was something in the ear. The earache proper soon subsided, but he became subject to violent attacks of neuralgic pain, with marked nocturnal exacerbations. The pain extended all over the left side of the head, but was most severe behind the ear. The hearing on this side became much impaired. On September 7 he came to London, and I then saw him. His symptoms were such as are described above. He had not slept, on account of the pain, for several nights. The tympanic membrane was normal in appearance. The tissues over the mastoid were red and swollen, and very tender. The ticking of a watch could not be heard close to the ear. Leeches and hot sedative applications were prescribed, and sedatives were given internally. During the next few days a spot over the mastoid as large as the finger-tip became more elastic than the parts around; pus was suspected, and on September 11 a straight vertical incision was made down upon the bone, when a little pus escaped. The surface of the bone was soft and easily penetrated by the knife. Relief was immediate and complete. A day or two afterwards he was able to go to the seaside; and when I saw him, on his way back to the North, about one week later, the wound was all but healed, and he was feeling quite himself. He is now perfectly well, and his hearing is as good as ever.

Remarks.—This case shows that immediate relief from pain, as well as permanent recovery, may follow from an incision over the mastoid, when suppurative periostitis of that bone is propagated from acute or subacute inflammation of the meatus. The same benefit may be expected to follow the operation if periostitis exists without suppuration. If pus is present an incision is, of course, requisite, and should be made early; and it would be well to resort to the knife

in all cases in which there is continuous pain, with tenderness and œdema over the mastoid process. In some cases an incision seems all that is necessary; recovery following as soon as the tension of the inflamed periosteum and superficial structures is relieved. This, as it seems to me, is the lesson taught by case II. as contrasted with case I., in which anything short of trephining would have done but little good. But if the local pain continues after, or symptoms of cerebral irritation supervene upon, the simple incision, perforation of the mastoid cells should be performed. Nothing less than trephining at an early date would be of any use either in a third class of cases—viz. those in which rigors, tenderness on deep pressure, and œdema over the mastoid—follow shortly after acute suppuration of the tympanum.

LVII.—*A Case of Unilateral Morphœa, with Exostoses and Corneal Opacity.* Communicated by Mr. J. F. Streatfeild. With Remarks by Mr. Hutchinson. *Read May* 28, 1889.

THE case which I wish to bring before the Society is one very interesting to many, but it is not essentially an eye case. James Blunt, æt. 45, agricultural labourer, came to the Moorfields Eye Hospital three weeks ago for impairment of vision of the left eye. In infancy, he told me, he had had a 'strong' inflammation in that eye, and had often had a 'cold' in it. But this has probably nothing to do with his present state. On admission all the lower, exposed, part of the cornea of the left eye was opaque. The opacity was ill-defined, and extended upwards beyond the centre of the cornea. There was no redness at any part around the cornea—no *zone*, as in any ordinary keratitis, nor any other sign of inflammation of the eye. But it did not seem like an *old* opacity, and his eyesight had only been so bad for a fortnight before he came to the hospital. The eyelids could not be widely opened, and all the movements of the eyeball were limited. He has now been three weeks an in-patient, and the corneal opacity is much less in extent, and his vision, therefore, considerably improved since his admission. The state of the cornea seemed to me to resemble, in appearance, the preliminary irregular opacity of the cornea, which is seen to occur, from nutritional change or otherwise, in some cases of paralysis of the fifth nerve.

There was, however, no insensibility of the cornea. I then observed the peculiar brawny condition of the skin and subcutaneous parts of the left side of the face; that his face had no wrinkles on that side, and that, within the mouth, there were exostoses of the lower jaw, and of the hard palate, on the same side. He told me that, six months ago, he could hardly open his mouth at all. Mr. Hutchinson informs me that, irrespective of the eye affection, it is a case of extreme rarity.

Remarks by Mr. Hutchinson.

Through the kindness of Mr. Streatfeild I was afforded an opportunity of examining his patient, and the following are the notes which I made at the time :—

James Blunt, æt. 45, was admitted under Mr. Streatfeild's care in May 1880.

The whole left side of his face was in a condition of diffused morphœa. Up the middle of forehead was a tolerably definite line of demarcation, the right half showing the usual wrinkles, the left being smooth and tight. On the left side there were some portions which looked a little tallow-like, but none actually like ivory. One large patch towards the temple was slightly reddened. At first sight it might have been thought that his cheek did not suffer, but close inspection made it evident that the whole cheek was rather fuller than the other and less mobile, and that it was patchy, yellow, and red. The lower eyelid, especially, was yellow. His mouth was not quite symmetrical, the left corner being elevated. His upper eyelid drooped a little, and the lower lid was slightly elevated. The eyeball was a little congested, and there was a line of superficial corneal ulceration exactly where the lower lid touched.

The altered condition of the affected skin was much more evident to the finger than to the eye. Everywhere on the affected cheek the skin and subcutaneous cellular tissue was firm and slightly thickened. In most parts, and especially towards the middle of the face, it was impossible to pinch the skin up. On the cheek and temple this condition was less marked, but still in contrast with the other side the rigidity was well marked. The cheek and forehead moved but little during whistling, frowning, &c., and he could not puff the cheek out beyond a very slight extent.

The rigidity of the skin made it difficult to expose the eyeball widely, especially the lower lid felt fixed and stiff. The pupil was of normal size (No. 3), and acted fairly, and

accommodation was good. He could not move the eyeball well in any direction, upwards, downwards, outwards, or inwards, but it was clear that none of the muscles were really paralysed, as he accomplished some movement in all these directions. He appeared to have difficulty in moving the other to considerable degrees, and in maintaining its position after he had accomplished a considerable displacement to right or left.

Just to the right of middle line on the palate was a hard exostosis the size of a horse-bean. This was placed a little in front of the junction of soft palate, and coming forward from it along the right side of the junction of the palate processes were several other small bony growths. There was also ill-defined thickening of the body of the lower jaw.

In opening his mouth the jaw-bone moved much more on the right side than the left. The fingers placed over the two articulations felt the head of the bone to slide forwards on the right when he depressed the jaw, whilst it moved but little on the other.

My impression is that all these symptoms should be explained by the diagnosis of morphœa, the skin, subcutaneous cellular tissues, periosteum, and bone being all affected. The partial immobility of the eyeball is probably due to the sclerosed condition of the cellular tissue surrounding the muscles. Thus we find the iris and ciliary muscle little if at all affected. The ulceration in the cornea is probably due to the pressure of the edge of the sclerosed lower lid against the eyeball. The unsymmetrical movement of the lower jaw is due to induration of the structures of left cheek and about the joint, and perhaps in part to alterations in its form.

Mr. Streatfeild's patient is a healthy farm labourer. He said that he first noticed some stiffness of the left cheek about six months ago. About a month ago his eye inflamed, and until this occurred he had not taken much notice of his ailment. He had had very little pain in the eye, and none in the cheek. There was no defect of sensation in the affected parts.

He said that in infancy this eye had been inflamed, and that ever since it had been liable to catch cold. He had never had toothache or tic. It is not improbable that he overlooked the beginning of the changes in the skin, and that they have been in progress considerably longer than he states.

The occurrence of exostosis and bone thickening in

association with morphœa changes in the skin is of great interest. I have seen it before in one or two instances, but never such large and definite exostoses.*

LVIII.—*An unusual Case of Cardio-pulmonary Bruit.*

By Frederick Taylor, M.D. *Read May* 28, 1880.

STEPHEN B., æt. 38, a blacksmith by trade, and residing at Poplar, came to me, as an out-patient, on Friday, February 27, 1880. He said that he was fairly well until March 1879, when he was taken with cold clammy sweats, and continual coughing and spitting at night. He attended for some little time at the Victoria Park Hospital, but got no material relief, and the coughing and spitting have continued ever since. The sweating has ceased, but he has lost flesh to the extent of 2 stones weight in the last year, and he has discontinued work since the middle of February. For two or three months he has heard a peculiar noise in his chest. He had rheumatic fever at the age of 18 or 19.

He is of medium height, with dark hair and eyes, pale sallow face, and only average breadth of shoulders. He is now spare, both in muscle and subcutaneous tissue. On the back of the right wrist is a rather extensive ganglion, from which, he says, seed-like bodies have been extracted by means of a small incision. There is marked clubbing of the ends of the fingers. The chest is flat, fairly symmetrical, with a wide epigastric angle. During quiet respiration the left upper chest scarcely moves at all; the right upper chest moves freely; the lower chest on either side expands only slightly, but there is more retraction of the intercostal spaces on the left side than on the right. Percussion gives the following results: In front the right side is hyper-resonant, and full resonance encroaches on the hepatic area, and extends over the middle line nearly to the nipple, between the third and sixth costal cartilages. Above the clavicle on the left side the note is resonant, but it is less so below the clavicle, and becomes dull at the level of the third rib. Passing downwards outside the nipple towards the axilla, the note becomes semitympanitic at the nipple level, distinctly tympanitic, with occasional cracked-pot quality, in the anterior axillary

* See 'Clinical Lectures,' by J. Hutchinson, vol. i. p. 331. In this case numerous little shot-like nodules formed in connection with the fasciæ and periosteum.

line over the eighth and ninth ribs, and still more loudly tympanitic in the mid-axillary line. Behind this line the note again gets dull, and remains impaired over the whole of the left back. The right side posteriorly is slightly hyper-resonant.

Over the area of tympanitic resonance there is soft cavernous breathing.

Vocal resonance is slightly bronchophonic above and below the clavicle. Below the third rib there is whispering repetition of the voice, which becomes very loud over the cardiac region and just outside the nipple line, and most sharply whispering in the lateral or axillary line. The intense whispering quality is carried round to the outer half of the posterior base limited above by a line one inch above the angle of the scapula, and internally by a vertical line dropped from this angle. Internal to this line the vocal resonance is ægophonic, and in the upper half of the chest it is audible but not loud.

Tactile vibration is deficient in front and behind, but perceptible in the axillary line. I was unable to get the *bruit d'airain* over the tympanitic area, and succussion yielded no splashing sounds.

More shortly stated the facts about the chest are as follows: The left side nowhere presents the normal conditions. In the upper third are impaired resonance, deficient breath sounds, and deficient vocal resonance. In the lower two-thirds are more complete dulness, various degrees of soft bronchial and cavernous breathing, various degrees of simple and whispering bronchophony, deficient tactile vibration. The evidences of cavity become marked in the lateral region, and are most pronounced in the anterior axillary line over the eighth and ninth ribs, somewhat below the level of the nipple. Here there is tympanitic percussion note, with marked cavernous breathing and very distinct whispering repetition of the voice. At the base near the spine the voice is ægophonic.

The impulse of the heart is in the sixth intercostal space, two inches below and one inch external to the nipple, slightly heaving. Neither sound of the heart is altogether clear. The first sound is replaced by, or consists of, a loud rough short noise represented by *tcha*; the second is sometimes clear, and then not very loud, sometimes replaced by a distinct short musical twang. The difference is determined by the respiratory act. The pulse is 120, and the respirations

36. There are, therefore, three beats of the heart to one respiration, and it is observed that the musical sound is absent during the first quick movement of inspiration, but is developed during expiration and the subsequent pause. This double sound is audible, not only over the heart, but over the whole chest, faintly on the right side and at points of the left side distant from the heart, loudly over the præcordia, louder at apex than at base, and loudest of all in the anterior axillary line three inches from the nipple. Here its intensity is almost painful. This is the point at which there is the most marked whiffing breathing, the most distinct whispering repetition of the voice, and tympanitic quality of percussion note.

The double noise can be heard by the ear at a distance of quite twelve inches from the chest. But the most remarkable result follows when he opens his mouth: the double sound is then loudly audible for a considerable distance in front of him, the vibrations being obviously conveyed through the cavity of the mouth, and giving one for the moment the impression that sounds are actually produced in the larynx.

As to the present condition of health: he coughs still, and spits a good deal of dirty yellow phlegm. He has spat blood, but only as a few streaks in the sputum, and this on three or four occasions. His breath is slightly fetid, but I have not hitherto seen any of the sputum. He does not sweat; his appetite is good, and the bowels are regular.

On March 12 the sphygmograph showed a soft fully dicrotic pulse, requiring a pressure of 3 ounces. The left vocal cord did not move freely, and was much reddened along its free margin. The right cord was perfectly healthy. He had, nevertheless, no difficulty in talking, and the voice was clear. The physical signs were essentially the same as before, with this exception, that there was less musical quality about the second cardiac sound. When he closed his mouth and nostrils completely the loud systolic and diastolic sounds were changed into an indistinct shuffling noise. The transmission through the open mouth was as marked as before.

On April 30 the cardiac sound was not so loud anywhere. It was audible for two successive beats during expiration, and scarcely audible in inspiration. Between the scapula and the spine the sound had an unusually amphoric quality.

The essential points of the above case are, no doubt, the following: A large cavity in close contact with the heart; vibrations produced by impact of the heart against its yielding

walls; and a sufficiently free communication of this cavity with one or more bronchi and the upper air passages. But it is more difficult to say what exactly are the physical conditions which will account for the phenomena in detail. Such cases as these, though well recognized, appear to be by no means common, and I have not as yet found any complete records of similar instances with which to compare my own. Guttmann* says the explanation of the cardio-pulmonary murmur, which arises from the proximity of a pulmonary cavity to the heart, is as follows: The shock caused by the movements of the heart drives a certain quantity of the air from the cavity into the bronchus with which it communicates; and such a murmur arises substantially from the same causes as the *bruit de pot fêlé*. What is remarkable in the present case is the extraordinary transmission of the sounds, not only over the whole chest, but also along the bronchial tubes and trachea, a condition of transmission which is not commonly brought about by ordinary excavations and consolidations. Our actual knowledge in this case amounts to this, that the sounds, however originally produced, are greatly intensified by resonance at a point of the chest where we have evidence from other physical signs that a large cavity exists. Further, the sounds have a musical quality, and I suppose that both their loudness and their musical quality contribute more to their distant transmission through the tissues of the chest than does any state of consolidation of the lung that may be present. The unusual intensity of the sounds in the upper air-passages must be the result of a free communication between the cavity and the larger bronchi; while the vibrations are still further reinforced in the pharynx and open mouth, in the same way as are those of the vocal cords in ordinary phonation.

As to the origin of his illness the history does not give very great assistance. But there can be little doubt there has been going on a process of chronic pneumonia, with excavation at the lower part of the lung. The extent of the disease in the left lung, and his failure to recover the flesh he has lost, render the prognosis unfavourable.

* Physical Diagnosis, 'Syd. Soc. Trans.'

LIX.—*Cancer of the Pylorus—Ulceration of the Cancerous growth, and formation of an Abscess between the Pylorus and Liver. Gangrene of the left Foot and Leg.* By T. Whipham, M.B. *Read May* 28, 1880.

THOMAS HUCKSTEP, a wheelwright, æt. 48, was admitted into St. George's Hospital, under my care, on November 27, 1879. In January 1879 he became an out-patient at St. Thomas's Hospital, under the care of Dr. Greenfield, when he complained of pain in the abdomen, which attacked him about half an hour after food, and lasted until relieved by vomiting. This vomiting usually occurred in about three hours after the accession of the pain. He had been losing flesh for three months previously. There had been no hæmatemesis.

Examination of the abdomen revealed the presence of a hard mass in the region of the pylorus—movable by respiration.

During the months of February, March, April, May, and June the above symptoms continued, but the tumour in April was less evident on palpation; it 'could only be felt with difficulty' (Dr. Greenfield's note).

On June 6, 1879, he was received into St. Thomas's Hospital, under the care of Dr. John Harley, and from the history then obtained it appeared that there was no evidence of malignant disease in the family; that he had in October 1878 been attacked by vomiting half an hour after food, the sickness being preceded by pain in the abdomen; that the pain was then relieved by vomiting; and that these symptoms continued up to the time of his admission as an out-patient under Dr. Greenfield.

When he came under the observation of Dr. Harley he was thin and pale; complained of pain in the epigastric and right hypochondriac regions; the pain was aggravated by food, and was more intense at night. The abdomen was somewhat full in the epigastrium; there was resistance to pressure in this region, and on deep inspiration something was felt to descend against the hand, but no definite tumour could be detected. Twelve months previously his weight was 9 st. 10 lbs.; at this time it was only 8 st. The pain prevented him from sleeping at night, and there was great tenderness

in the epigastrium. The sickness after meals continued until July 16, 1879, when he vomited during the night.

On August 9 he was discharged, much relieved, all vomiting having ceased, his weight being 8 st. ¾ lb.

Dr. Harley's diagnosis was 'carcinoma of the pylorus.'

On August 18 he again became an out-patient, under Dr. Greenfield. He had then no sickness, but had much pain in the epigastrium, both after food and on slight pressure. 'A nodulated mass was then found extending downwards in the region of the omentum.'

On August 25 he vomited bilious fluid two or three times. During the early part of September the pain and tenderness in the epigastrium persisted, but no vomiting occurred.

On September 17 he was readmitted into St. Thomas's, under Dr. Ord. He was then sallow, but not jaundiced. There was general pain over the abdomen, chiefly in the epigastrium. The liver extended in this region half-way to the umbilicus. The tenderness was below the margin of the liver, and to the right of the median line was a very tender spot. At this spot there was a sense of resistance, but no definite tumour. There was no vomiting.

During October the epigastric pain varied much in intensity, and he derived much relief from hypodermic injections of morphia.

On November 17 he weighed only 7 st. 6 lbs.

He left St. Thomas's Hospital on November 19, Dr. Ord's diagnosis being carcinoma of the pylorus.

For the above notes I am indebted to the kindness of Dr. Percy Smith.

On November 27 he was admitted into St. George's Hospital. The only additional symptom then was that his feet had been of late liable to swell when he sat up in bed, and that he suffered from pain across the loins.

He was extremely anæmic, and very depressed; he complained of pain in the region of the liver, which was a little enlarged. There was great tenderness on pressing upwards towards the under surface of the liver, tenderness over the pylorus, and slight tenderness over the spleen. No enlargement of the spleen or lymphatic glands was evident. Examination of the chest revealed nothing abnormal.

Microscopic examination of the blood showed (under the ¼-inch) fifty-two leucocytes in the field, most of which, even on the cold stage, showed decided amœboid movements.

The urine was neutral, sp. gr. 1011, and contained no albumen. On account of slight nausea the patient was ordered a mixture of hydrocyanic acid and soda, with light diet. A morphia draught and opium fomentation were prescribed, if the pain should increase towards night.

On December 3, 1879, the blood was examined on a warm stage, the temperature of which varied from 98·4° to 104° F.; and out of 56 leucocytes visible at one time in the field 50 were found to be actively amœboid, while slighter movements were seen in the remainder.

December 9.—The pain in the abdomen had entirely ceased, but he complained of a dull aching pain in the left foot. There was no visible alteration in the part, but it was colder than the right. The tongue was slightly coated, and the patient appeared more anæmic. The foot to be wrapped in cotton-wool.

10.—The pain in the left foot was very severe during the night. On examination there was a purple blush over the outer side of the foot and little toe, and two circumscribed patches of similar discoloration of the skin on the second and third toes. This foot was by this time much colder than its fellow, and there was some loss of sensation in the affected parts.

On the 12th no pulsation could be detected either in the dorsalis pedis or posterior tibial arteries, but the beating of the popliteal was distinct. Between this date and January 24 the gangrene extended so as to involve the lower two-thirds of the leg, the toes having become black and dry, and on the 15th pulsation was not to be felt below Hunter's canal. The parts involved in the gangrene were devoid of sensation, but the superficial and deep structures immediately above the discoloured skin were intensely tender.

On January 22 the blood was again examined, and of about forty leucocytes visible all but four or five were distinctly amœboid. The white corpuscles but little exceeded the red in size.

The patient took but little medicine, because it was deemed unadvisable to administer anything which might tend to excite vomiting. His diet was light and nourishing, but his appetite was bad. The chief treatment consisted in hypodermic injections of morphia when the pain either in the stomach or the foot became severe. Latterly they were frequently required, on account of the pain in the gangrenous

leg, but during the last few days of his life he suffered no pain whatever. Although the pain in the gastric region subsided with the accession of the gangrene, more or less tenderness always remained on upward pressure towards the under surface of the liver, and in this region there was a sensation of fulness, but no tumour could be detected. The patient himself repeatedly asserted that in the early part of his illness he distinctly felt a tumour, but that it had sunk down on the right side of his belly (describing a spot on a level with the umbilicus) and disappeared. The tumour, he said, was of the size of a walnut.

The temperature on December 13, when the gangrene began to extend rapidly, rose to 102° F., but after that date never exceeded 101° F. It was very irregular, being sometimes higher in the evening, at others in the morning. (See Plate IX.) The pulse latterly ranged from 120 to 136.

From December 24 the gangrene was stationary, and at that time involved the lower two-thirds of the leg, the line of discoloration being rather higher posteriorly than in front.

The last microscopic examination of the blood was made on December 22, when about forty white corpuscles were seen under a Hartnack's No. 7. They were about the size of lymph cells, and with the exception of four or five were all distinctly amœboid on a warm stage.

The urine on one occasion (December 22) showed a trace of albumen, otherwise this secretion was perfectly natural. At the end of the year the patient's strength began to fail rapidly, and on January 3, 1880, he sank exhausted.

At the post-mortem examination the gangrene was found to commence four inches below the left knee; a coagulum was found which obstructed the circulation from the middle of the femoral artery to the termination of the popliteal; the lungs were emphysematous; there was slight thickening of the valves on the right side of the heart; the liver was fatty; the kidneys were natural; the spleen was diffluent, and weighed 16 oz.

On raising the liver, pus welled up between it and a hard round mass connected with the pylorus. Dissection showed that the pus escaped from an abscess of about the size of an orange. Suppuration had been caused by ulceration of a cancerous growth affecting the pylorus; perforation of the stomach had occurred at the seat of ulceration, and thus an abscess had formed, limited by protective adhesions. Al-

though the channel through the pylorus was narrower than natural, it was sufficiently wide to allow of the passage of the little finger.

Remarks.—The case is interesting clinically for many reasons, viz. :—

1. On account of the entire cessation during the last four months of the patient's life of a symptom which had been especially prominent in the earlier stages of the disease, viz. vomiting.

'It is a curious feature in these malignant diseases of the stomach,' says Sir Thomas Watson,* 'that the symptoms sometimes remit in a remarkable manner, so as to excite a hope in the mind of the patient and of his medical adviser that the nature of the malady had been mistaken, and that recovery is about to take place.' Dr. Wilson Fox, in his article in Reynolds' 'System of Medicine' (vol. ii., p. 952), alludes to the same fact, and in a footnote refers to cases recorded by Pemberton, Andral, Cruveilhier, and Abercrombie in which cancer of the stomach existed, but in which few of of its symptoms were evident. Dr. B. Yeo has recorded a case ('Lancet,' January 29, 1876) of cancer of the pylorus in which the symptoms remitted frequently during the exceptionally long period of seventeen years. The remission of symptoms directly referable to the disease of the stomach Dr. Yeo attributes to the careful dieting to which the patient was subjected; that is, to avoidance of all food which cannot be absorbed by the stomach, and must therefore pass through the pylorus.

2. On account of the disappearance of the tumour.—'Sometimes,' remarks Dr. Wilson Fox in the above-mentioned article, the tumour 'may disappear entirely for many days, either from twisting of the stomach upon its axis, by which the pylorus is brought below the liver, or from its being covered by the distended colon. In some cases Brinton thinks that its complete disappearance may be due to sloughing and destruction of the growth.'

In the present case the great tenderness, and consequent rigidity, of the abdominal muscles, resulting from the formation of the abscess, may have prevented the detection of the tumour by palpation; or again the outline of the cancerous pylorus, at one time so evident to Dr. Greenfield, may have been obliterated by the gradual increase in the size of the

* 'Principles and Practice of Medicine,' vol. iii., p. 451; ed. 1857.

abscess, and so palpation revealed merely a fulness, rather than a definite tumour.

3. The gangrene of the leg and foot is worthy of note. Schmidt has pointed out the not unfrequent occurrence of this affection in cases of leuchæmia; and one cause of gangrene, as is well known, is 'an unhealthy crasis of the mass of the blood.'* The departure from the healthy standard of the blood, as shown by the great excess of leucocytes in the field of the microscope in the case under consideration, was amply indicated.

4. As to the excess of white corpuscles in the blood, it is an observation of Trousseau's that cancer of the internal viscera is commonly attended by such a condition, and my own observations tend to confirm this statement. At the same time it is not invariably so, for on December 1, 1879, a woman (Elizabeth W., aged 40) died in an extreme state of emaciation, under my care, in St. George's Hospital, of cancer of the head of the pancreas.

Microscopic examination of her blood was made on one or two occasions, but without any increase of the white corpuscles being evident. Her spleen weighed 10 oz.—a great increase in size, when her extreme emaciation is duly taken into consideration.

In the present case there was considerable enlargement of the spleen (16 oz.), and the excess of leucocytes may have been connected with the change in that organ. It is, however, equally possible that the increase in the number of the leucocytes was only apparent, the appearance of excess being in reality due to a deficiency of the red corpuscles. I regret that the blood was not examined with Hayem's hæmocytometer.

Lastly, the entire absence of dryness and of that peculiar want of elasticity of the skin usually so characteristic of cancer is a remarkable feature in this case. Doubtless this condition of the skin does occur in the majority of cases of cancer, but at the same time it is not an absolutely trustworthy point in diagnosis. I would call attention to the case of a woman who died not long since, under my care, of an ulcer (not cancerous) of the stomach, in whom this dryness and want of elasticity of the skin generally, and especially of that covering the abdomen, led me to the erroneous diagnosis of cancer of the stomach.

* Jones and Sieveking's 'Pathology,' ed. by Payne, p. 110.

LX.—*Sequel of a Case of Intestinal Obstruction, for which Gastro-Enterotomy was performed.** By George Lawson.

THE patient of Dr. Cayley's, W. H. C., æt. 23, in the Middlesex Hospital, upon whom gastro-enterotomy was performed by Mr. Lawson, on November 6, 1878, and whose case was reported in the last volume of the 'Transactions,' survived the operation forty weeks and two days. The greater part of this time was passed in bed, as the patient when up felt more or less pain in the abdomen. He frequently suffered from constipation, and then had pain, but this was always relieved by a free action of the bowels through the wound. Although unable to be up, the patient amused himself by reading. He read almost without ceasing every book lent him. About three weeks before his death he began to fail; he had frequent pain in the belly, with sickness and loss of appetite. He rapidly declined, and died on August 29, 1879. For the following notes we are indebted to Dr. Coupland.

Disease.—Colloid cancer of sigmoid colon and annular cancerous stricture of ascending colon at hepatic flexure. Secondary growth in liver and in pelvic glands. Thrombus of right iliac vein. Enterotomy (cæcal) wound of forty weeks and two days' date. Examination made twenty hours after death.

Post-mortem.—General appearance: Extremely emaciated. Face and right arm much disfigured by an extensive cicatrix of a burn. A little to the left of middle line of abdomen in the hypogastric region is an oval aperture in the parietes leading into intestine, the margin of orifice being stained with fæcal matter.

On opening the abdomen the peritoneum was found not generally inflamed. The right lobe of liver appeared greatly enlarged and nodulated, reaching half-way to umbilicus. The transverse colon was of immense size, distended with firm fæcal matter. It was much elongated, and formed rather an acute angle in the right iliac fossa (see fig. 1), whilst it almost entirely concealed the small intestines from view. When raised up and placed over the ribs some of the ileal coils were brought into view; but now also it was seen that

* Reported in vol. xii. of the 'Transactions of the Clinical Society,' p. 74.

the ascending and descending portions of the colon were quite as much distended as the transverse (see fig. 2). The cæcum was adherent to the parietes opposite the artificial anus which opened into the anterior part of the *cul-de-sac* of that portion of the gut. Also firmly adherent to the cæcum, and matted together with some coils of ileum in the vicinity, was the sigmoid colon.

The small intestine was now removed. It was nearly empty of contents, and was natural throughout. The following is a description of the large bowel in its whole course :—

Cæcum.—The opening of the artificial anus was placed in the anterior wall opposite to the point of entrance of the ileum. Both the cæcum and the *ascending colon* were much distended with semi-solid brown-coloured fæcal matter. At the hepatic flexure the colon became abruptly narrowed, the stricture barely admitting the point of the little finger. The walls were puckered in at this point, and on being laid open the gut was found to be encircled within by an annular ulcer with irregular, everted, and thickened margins, and a sloughing base. The width of the ulcer was less than one inch, and the gut was so weakened at this point that, during removal, it gave way. But immediately beyond the stricture the *transverse colon* became immensely dilated, and from this point to the sigmoid the bowel was of the size of the adult arm, and distended with fæcal matter. The walls, besides being so inordinately stretched, were considerably thickened, the thickening being chiefly due to an increase of the muscular coat. On the wall of the *descending colon* were several flattened cancerous nodules. In the region of the *sigmoid* it was difficult at first to differentiate the parts—all were matted inextricably together—but on carefully laying open the bowel a large cauliflower-like mass was found to project into the gut at this point, completely occluding it. The growth was soft, and had the characters of colloid and medullary cancer. It involved all the coats of the bowel, which at one point were so destroyed that a fistulous communication was established between the colon and the cæcum, which here was firmly adherent to the mass. Thus there were two strictures of the large bowel, one in the form of an annular ulcer at the hepatic flexure, the other in the form of an exuberant cancerous growth at the sigmoid flexure. Between these two points the mucous membrane of the bowel, although deeply stained with fæcal matter, presented no evidence of erosion or

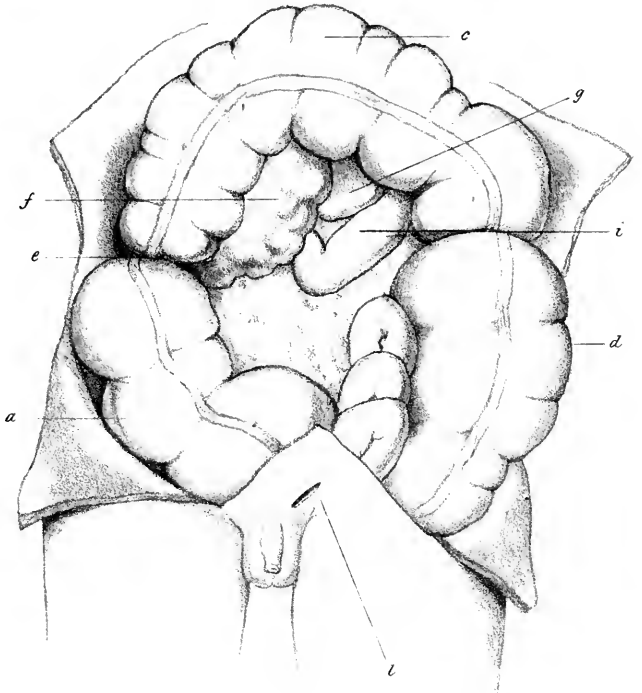


Fig. 2.

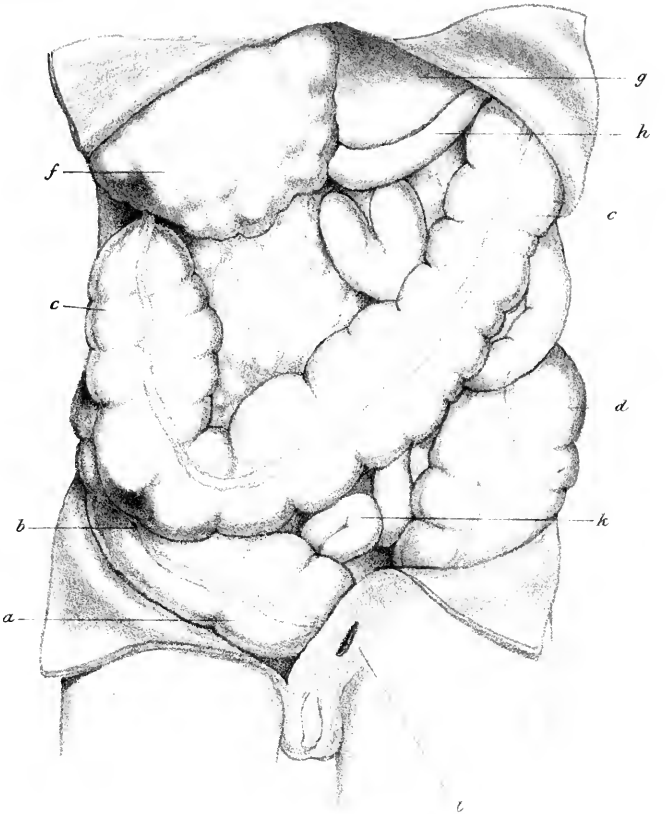


Fig. 1

W.Hurst lith

Hanhart imp

ulceration. The following are circumferential measurements of the large intestine at different points of its course:—

At stricture of hepatic flexure, $2\frac{1}{2}$ inches; at 3 inches beyond hepatic flexure, $5\frac{3}{4}$ inches; at 6 inches beyond hepatic flexure, $6\frac{1}{4}$ inches; at 15 inches beyond hepatic flexure, 12 inches; midway between splenic flexure and sigmoid, 14 inches.

The stomach was small, but natural.

The pelvic glands were infiltrated with cancer, a large mass, the size of a hen's egg, lying along the course of the right iliac vessels. On section this mass was soft, and white in colour, with points of translucent (colloid) appearance.

The right iliac vein was completely blocked by an adherent but only partially decolorized thrombus.

The liver, enormously enlarged, especially the right lobe, which was almost wholly converted into a mass of colloid cancer, which projected from both surfaces in the form of large irregular tumours. On section but little hepatic tissue remained, so completely was the lobe infiltrated. The left lobe contrasted markedly with this, for although it was almost twice the normal size it was wholly free from cancer growth.

The spleen was pale, small, and shrivelled.

The kidneys presented no abnormal condition.

The heart was flaccid, its valves and muscular tissue natural; and, beyond considerable hypostatic engorgement of the *right lung* and marginal collapse of the lower lobes, the lungs also were natural.

Weights.—Heart, $6\frac{1}{2}$ oz.; right lung, 22 oz.; left lung, $15\frac{1}{2}$ oz.; liver, 93 oz.; right kidney, $4\frac{1}{2}$ oz.; left kidney, $4\frac{1}{2}$ oz.; spleen, $3\frac{1}{4}$ oz.

The fæcal matter contained in the large intestine was collected, and found to weigh upwards of 8 lbs.

REFERENCES TO PLATE XII.

(*a*) Cæcum. (*b*) Ascending colon. (*c*) Transverse colon. (*d*) Descending colon. (*e*) Seat of upper stricture. (*f, g*) Right and left lobes of the liver. (*h*) Stomach. (*i*) Duodenum. (*k*) Small intestines. (*l*) Artificial anus.

INDEX.

PAGE

ADAM (E.), case of Gunshot Wound 137
Ague in India, case of Chylous Urine after (S. O. Habershon) . 142
Albuminuria in a case of Chylous Urine after ague in India (S. O. Habershon) 142
ALCOCK (Surgeon-Major), case of perforating Wound of the Lung 47
Amputation through the Hip-joint (W. Stokes) 233
Aneurism, Femoral, treated by ligature of the external Iliac Artery; recovery (H. H. Clutton) 193
——— Popliteal, two cases cured by the application of Esmarch's Bandage (Ch. Heath) 151
——— of the scalp, Traumatic, case of (W. J. Tyson) . . 64
Ankylosis of the Hip, angular, section of femur above the small trochanter for (R. Barwell) 241
Artery, external iliac, ligature of a Femoral Aneurism; recovery (H. H. Clutton) 193
Astragalus, case of subastragaloid Dislocation (T. P. Pick) . 132

Bandage, Esmarch's, two cases of Popliteal Aneurism cured by application of (C. Heath) 151
BARLOW (Thomas), see *Report* of Committee on Chloral.
BARWELL (Rd.), on section of the Femur above the small trochanter for angular Ankylosis of the hip 241
Bone, Frontal, removal of the frontal portion of, the roofs of both orbits, the palate, left eyeball, &c., followed by restoration to health (A. T. Norton) 48
——— Temporal, fracture through, in a child aged thirteen months (F. S. Eve) 191
Bone-setting, some cases, with remarks (H. Marsh) . . . 219
Breast, Cancer of, following long-standing Eczema of the nipple (G. Lawson) 37

PAGE

Brodhurst (B. E.), case of Genu Valgum, with remarks on subcutaneous osteotomy 129
Bruit, cardio-pulmonary, an unusual case (F. Taylor) . . 365
Buzzard (Thomas), case with symptoms of acute Rheumatism which terminated fatally on the tenth day 127
——— case of Paraplegia from Pott's disease, treatment by Sayre's jacket, intestinal obstruction, death from a kink in duodenum 157
——— case of rapid Paralysis involving the four extremities, face, respiration, and deglutition; syphilitic history; recovery 180
——— see *Report* of Committee on Chloral.

Calcareous degeneration of vessels in a case of secondary Hæmorrhage from a thigh stump (W. H. Cripps) . . . 237
Cancer of the Breast following long-standing Eczema of the nipple (G. Lawson) 37
——— ——— report of microscopical examination, by Geo. Thin 39
——— of the Pylorus, ulceration and abscess between pylorus and liver, &c. (T. Whipham) 369
Cataract, removal of a shrunken fluid, sympathetic inflammation of the other eye (E. Nettleship) 207
Cayley (W.), see *Report* of Committee on a case of Leprosy.
Chloral, *Report* of the Committee on (Sir William Jenner, Dyce Duckworth, Robert Farquharson, Thomas Buzzard, Thomas Barlow) 117
Chylous Urine, case of, after Ague in India, cessation, development of glycosuria and polyuria (S. O. Habershon) . . . 142
Clutton (H. H.), case of Femoral Aneurism, treated by ligature of the external iliac artery; recovery. 193
——— case of acquired Hypertrophy of one limb . . . 350
Committees, see *Reports* of.
Connective Tissue, mucoid degeneration of, see *Myxœdema.*
Cornea, Wound of, by piece of wood, purulent cyclitis, excision, severe iritis twenty-four days after excision (E. Nettleship) 212
Corneal Opacity in a case of unilateral Morphœa (J. F. Streatfeild) 362
Cripps (W. Harrison), case of secondary Hæmorrhage from a thigh stump, with calcareous degeneration of the vessels . 237
Crocker (H. Radcliffe), case of congenital Sebaceous disease of the head and neck 40

PAGE

CROCKER (H. Radcliffe), *Report* on ditto (Dyce Duckworth, R. Liveing, Jon. Hutchinson, H. R. Crocker) 42
——— case of Morphœa with raised patches arranged in the course of nerves 116
——— case of anæsthetic Leprosy 172
——— *Report* on J. F. Goodhart's case of Keloid Growth following small-pox 54
CROFT (John), excision of both Hip-joints for symmetrical disease, femoral necrosis, antiseptic operations; successful result . 66
——— analysis of forty-five cases of Excision of Hip-joint . 71
——— ——— general *Table* of cases 80–95
——— ——— *Tables* of deaths and of cases cured . . 96–103

DAVIES-COLLEY (N.), see *Habershon* and Davies-Colley, case of Pyelitis.
Degeneration, Calcareous, of vessels in a case of secondary Hæmorrhage from a thigh stump (W. H. Cripps) 237
Diaphragm, penetration of, by impacted Fish-bone in Œsophagus (F. S. Eve) 174
Dislocation, case of subastragaloid (T. P. Pick) 132
Duboisin, instillation of, in acute Ophthalmitis (Spencer Watson) 43
DUCKWORTH (Dyce), on a case of Myxœdema or universal mucoid degeneration of the connective tissue of the body . . 12
——— *Report* on H. R. Crocker's case of Sebaceous disease of the head 42
——— *Report* on J. F. Goodhart's case of Keloid Growth following small-pox 54
——— see *Report* of Committee on Chloral.
——— see *Report* of Committee on a case of Leprosy.
Duodenum, death from a kink in, in a case of Paraplegia from Pott's disease (T. Buzzard) 157

Eczema of the Nipple, long-standing, followed by Cancer of the Breast (G. Lawson) 37
Embolisms, multiple, in a case of acute Rheumatism (R. Southey) 227
Empyema, case of, in which portions of Ribs were excised (F. Taylor and H. G. Howse) 19
Endocarditis, ulcerative, in acute Rheumatism, multiple embolisms, death on tenth day (R. Southey) 227
Esmarch's Bandage, two cases of Popliteal Aneurism cured by application of (Ch. Heath) 151

PAGE
Ethmoid Bone, &c., removal of (A. T. Norton) . . . 48
Eve (Frederick S.), case of impacted Fish-bone in the Œsophagus, penetrating the diaphragm and pericardium and wounding the heart 174
——— case of Fracture extending through the Temporal Bone in a child aged thirteen months 191
Excision of the Eye, sympathetic ophthalmitis of the other eye setting in after (E. Nettleship) 206
——— of Hip-joint, analysis of forty-five cases of (J. Croft) . 71
——— —— ditto, general *Table* of the cases . . . 80–95
——— —— ditto, *Tables* of deaths and of cures . . 96–103
——— ——— new method of, six cases, with remarks on the pathology and treatment of Hip Disease (R. W. Parker) . 104
— —— ——— in an adult, the case two years after the operation (H. A. Lediard) 113
——— of both Hip-joints for symmetrical disease, femoral necrosis, &c. (J. Croft) 66
——— of part of the Radius and Ulna in a myeloid disease of radius, leaving a useful hand (H. Morris) 155
——— of portions of ribs in a case of Empyema (F. Taylor and H. G. Howse) 19
Exfoliation and suppuration of Nails of uncertain origin (A. Sangster) 149
Exostoses in a case of unilateral Morphœa (J. F. Streatfeild) . 362
Eyes, acute Ophthalmitis affecting both, treatment by rapid mercurialisation and the instillation of Duboisin (Spencer Watson) 43
——— see *Excision, Ophthalmitis.*

Face, see *Paralysis* of.
Farquharson (Robert), see *Report* of Committee on Chloral.
Femur, section of, above the small trochanter for angular Ankylosis of the Hip (R. Barwell) 241
Fever, see *Rheumatic, Typhoid.*
Fish-bone, impacted, in the Œsophagus, penetrating the diaphragm and pericardium and wounding the heart (F. S. Eve) . . 174
Fistula, Traumatic Salivary, treated by passing a fine catgut bougie from the mouth through Stenson's duct; recovery (H. Morris) 144
Fracture through the Temporal Bone in a child aged thirteen months (F. S. Eve) 191

PAGE

Frontal Bone, see *Bone.*

Gangrene, spontaneous, of the Thumb and Fingers of the right hand (Thomas Smith) 196
Gastro-enterotomy performed in a case of Intestinal Obstruction, sequel of case (Geo. Lawson) 375
Genu Valgum, case of, with remarks on subcutaneous Osteotomy (B. E. Brodhurst) 129
Glands, enlarged, in Leprosy, *Report* of the Committee on Surgeon-Major Porter's case of 1
Glycosuria, development of, after cessation of chylous urine (S. O. Habershon) 142
Goodhart (James F.), case of unusual development of Keloid in small-pox scars 51
——— *Report* of the Committee on ditto (Dyce Duckworth, R. Liveing, H. R. Crocker, Jonathan Hutchinson, J. F. Goodhart) 54
——— case of acute Rheumatism treated by salicylic acid and terminating fatally 123
Greenhow (Edw. Headlam), case of Typhoid Fever, associated with acute nephritis and profuse hæmaturia, without dropsy 177
——— cases of Rheumatic Fever treated with salicin . . 244
——— ——— summary 258
——— cases of Rheumatic Fever treated with salicylate of soda . 262
——— ——— summary 327
Gunshot, see *Wounds* (gunshot).

Habershon (S. O.), case of Chylous Urine after ague in India, albuminuria, cessation of chylous urine, development of glycosuria and polyuria 142
——— and N. Davies-Colley, case of Pyelitis, discharge of pus, incision in the Loins; recovery 138
Hæmaturia, profuse, without dropsy, in a case of Typhoid Fever (E. H. Greenhow) 177
Hæmorrhage, secondary, from a Thigh Stump, with calcareous degeneration of the vessels (W. H. Cripps) 237
Hall (F. de Havilland), case of Intrathoracic Sarcoma . . 200
Hand, right, spontaneous Gangrene of the thumb and fingers of (Thomas Smith) 196
Harris (V. D.), *Report* on microscopic specimens of tissues from a case of true Leprosy 11
Head and Neck, congenital Sebaceous disease of (H. R. Crocker) 40

PAGE

Heart wounded by impacted Fish-bone in the Œsophagus (F. S. Eve) 174

Heath (Christopher), two cases of Popliteal Aneurism cured by the application of Esmarch's bandage 151

Herpes of the face following Thrombosis of the lateral sinus and jugular vein in disease of the mastoid bone (H. Morris) . 352

Hewitt (Graily), case of acute hysterical Vomiting of ten months' duration, caused by displacement of the uterus . . . 346

Hip-joint, Amputation through (W. Stokes) 233

——— Excision of, analysis of forty-five cases (J. Croft) . . 71

——— ——— general *Table* of cases and *Tables* of deaths and cases cured 80–103

——— Excision of, new method of, six cases, with remarks on the pathology and treatment of Hip disease (R. W. Parker) 104

——— ——— in an adult, case two years after the operation (H. A. Lediard) 113

Hip-joints, Excision of both, for symmetrical disease, femoral necrosis, &c. (J. Croft) 66

Howse (H. G.), see *Taylor* and Howse, case of Empyema.

Hulke (J. W.), case of Sutural Union of the median Nerve in the fore-arm five weeks after division by a broken glass bottle, followed by return of function 147

Hutchinson (Jonathan), remarks on J. F. Streatfeild's case of Unilateral Morphœa 362

——— *Report* on H. R. Crocker's case of Sebaceous disease of the head 42

——— *Report* on J. F. Goodhart's case of Keloid Growth following small-pox 54

Hygroma, Cystic, two cases of Congenital (Thomas Smith) . 197

Hyperpyrexia, two cases of cerebral symptoms in acute Rheumatism without (R. Southey) 25

Hypertrophy, acquired, of one limb, right lower (H. H. Clutton) 350

Inflammation, sympathetic, of the Eye, see *Ophthalmitis.*

Intestinal obstruction for which Gastro-enterotomy was performed, sequel of case (Geo. Lawson) 375

Jenner (Sir W.), see *Report* of Committee on Chloral.

Keloid, *Report* on the difference between the various forms of, and of Keloid peculiar to syphilis 54

——— *Report* on a growth following small-pox 54

PAGE

Keloid, case of unusual development of, in Small-pox scars (J. F. Goodhart) 51

Lawson (George), case of Cancer of the Breast, following long-standing eczema of the nipple 37
——— sequel of a case of Intestinal Obstruction for which Gastro-enterotomy was performed (in Vol. XII. of the Transactions) 375
Lediard (H. A.), case of Excision of the Hip-joint in an adult two years after the operation 113
Leprosy with enlarged Glands, *Report* of the Committee on Surgeon-Major Porter's case of 1
——— Anæsthetic, case of (H. R. Crocker) 172
Ligature, see *Artery*.
Lightning, case of James Orman, struck by, June 8, 1878 (Geo. Wilks) 32
Limb, acquired Hypertrophy of one, right lower (H. H. Clutton) 350
Liveing (Robert), *Report* on H. R. Crocker's case of Sebaceous disease of the head 42
——— *Report* on J. F. Goodhart's case of Keloid Growth following small-pox 54
——— see *Report* of Committee on a case of Leprosy.
Lung, perforating Wound of (Surgeon-Major Alcock) . . 47

Marsh (Howard), some cases of Bone-setting, with remarks . 219
Mastoid Bone, two cases of disease of, in one of which severe Herpes of the face followed Thrombosis of the lateral sinus and jugular vein (Hy. Morris) 352
Maxillæ, superior, &c., removal of (A. T. Norton) . . . 48
Mercurialisation, rapid, in acute Ophthalmitis (Spencer Watson) 43
Molluscum fibrosum, case of, with remarks on its histology (A. Sangster) 166
Morphœa, case of, with raised patches arranged in the course of Nerves (H. R. Crocker) 116
——— unilateral, with Exostoses and corneal opacity (J. F. Streatfeild) 362
Morris (Henry), case of Traumatic Salivary Fistula, treated by passing a fine catgut bougie from the mouth through Stenson's duct; recovery 144
——— case of Myeloid disease of the Radius, in which part of the radius and ulna were excised four years ago, leaving a useful hand 155

PAGE

Morris (Henry), two cases of disease of the Mastoid Bone, in one of which severe Herpes of the face followed thrombosis of the lateral sinus and jugular vein 352
Myeloid disease of the Radius, in which part of the radius and ulna were excised four years ago, leaving a useful hand (H. Morris) 155
Myxœdema, case of (D. Duckworth) 12
——— cases of (W. M. Ord) 15

Nails, exfoliation and suppuration of, of uncertain origin (A. Sangster) 149
Neck, congenital Sebaceous disease of (H. R. Crocker) . . 40
Necrosis, femoral, Excision of both hip-joints (J. Croft) . . 66
Nephritis, acute, without dropsy, in a case of Typhoid fever (E. H. Greenhow) 177
Nerve, median, sutural union of, in the fore-arm, five weeks after division by a broken glass bottle, followed by return of function (J. W. Hulke) 147
Nerves, raised patches arranged in the course of, in a case of Morphœa (H. R. Crocker) 116
Nettleship (Edward), three cases of sympathetic Ophthalmitis setting in three weeks after Excision of the other eye, with abstracts of other cases published 206
Nipple, see *Eczema.*
Norton (A. T.), removal of the frontal portion of the Frontal Bone, the roofs of both orbits, the ethmoid bone, left eye-ball, &c., followed by restoration to health . . . 48

Obstruction of Intestines, see *Intestinal* Obstruction.
Œsophagus, impacted Fish-bone in, penetrating the diaphragm and pericardium and wounding the heart (F. S. Eve). . 174
Ophthalmitis, acute, affecting both eyes; treatment by rapid Mercurialisation and the instillation of Duboisin (Spencer Watson) 43
——— sympathetic, three weeks after Excision of the other eye; three cases (E. Nettleship) 206
——— ——— abstracts of published cases of, setting in after Excision of the other eye 214
Orbits, removal of roofs of both, ethmoid bone, &c. (A. T. Norton) 48
Ord (Wm. Miller), cases of Myxœdema 15
Orman, James, case of, struck by Lightning, 1878 (Geo. Wilks) 32
Osteotomy, subcutaneous, remarks on (B. E. Brodhurst) . . 129

PAGE

PAGET (Sir James), see *Wilks* (case of J. Orman, struck by Lightning).

Palate, &c., removal of (A. T. Norton) 48

Paralysis, rapid, involving the four extremities, face, respiration, and deglutition (T. Buzzard) 180

Paraplegia, from Pott's disease, treated by Sayre's jacket, death from a kink in duodenum (T. Buzzard) 157

PARKER (R. W.), on a new method of Excising the Hip-joint (six cases), together with remarks on the pathology and treatment of Hip disease 104

Pericardium, penetration of, by impacted Fish-bone in Œsophagus (F. S. Eve) 174

PICK (Thomas Pickering), case of subastragaloid Dislocation . 132

Polyuria, development of, after cessation of Chylous Urine (S. O. Habershon) 142

PORTER (Surgeon-Major), case of Leprosy with enlarged glands, *Report* of the Committee on 1

Pott's disease, Paraplegia from, treated by Sayre's jacket, death from a kink in duodenum (T. Buzzard) 157

POWELL (R. Douglas), see *Report* on Surgeon-Major Porter's case of Leprosy with enlarged glands.

Pus, discharge of, see *Pyelitis*.

Pyelitis, case of, discharge of Pus, incision in the loins; recovery (S. O. Habershon and N. Davies-Colley) 138

Pylorus, Cancer of, ulceration and abscess between pylorus and liver, &c. (T. Whipham) 369

Radius, Myeloid disease of, in which part of the Radius and Ulna were excised four years ago, leaving a useful hand (H. Morris) 155

Report of the Committee on Chloral (Sir William Jenner, Dyce Duckworth, Robert Farquharson, Thomas Buzzard, Thomas Barlow) 117

Report on H. Radcliffe Crocker's case of Congenital disease of the Scalp (Dyce Duckworth, Robert Liveing, Jonathan Hutchinson, H. Radcliffe Crocker) 42

Report of the Committee on J. F. Goodhart's case of Keloid Growth following small-pox, also on the difference between various forms of keloid and of keloid peculiar to syphilis (Dyce Duckworth, Robert Liveing, H. R. Crocker, Jonathan Hutchinson, and J. F. Goodhart) 54

PAGE

Report of the Committee on Surgeon-Major Porter's case of Leprosy with enlarged Glands [in Pathological Society's Transactions, Vol. XXIX., p. 335] (W. Cayley, Robert Liveing, Dyce Duckworth, R. Douglas Powell) . . . 1
——— ditto, Microscopic *Report* on the Tissues by V. D. Harris 11
Rheumatic Fever, see below *Rheumatism* (acute).
Rheumatism, acute, two cases, (I.) cerebral without hyperpyrexia (R. Southey) 25
——— ——— (II.), sudden death without elevation of temperature, but with post-mortem appearances which have been attributed to hyperpyrexia (R. Southey) . . . 29
——— ——— case with symptoms of, terminating fatally on the tenth day (T. Buzzard) 127
——— ——— with ulcerative endocarditis, multiple embolisms; death on the tenth day (R. Southey) 227
——— ——— cases of Rheumatic Fever treated with Salicin (E. H. Greenhow) 244
——— ——— cases of Rheumatic Fever treated with Salicylate of Soda (E. H. Greenhow) 262
——— ——— case of, treated by Salicylic Acid, and terminating fatally (J. F. Goodhart) 123
Ribs, excision of portions of, in a case of Empyema (F. Taylor and H. G. Howse) 19
Ringworm, a calotte after use in the treatment of (B. Squire) . 63

Salicin, case of Rheumatic Fever treated with (E. H. Greenhow) 244
Salicylate of Soda, cases of Rheumatic Fever treated with (E. H. Greenhow) 262
Salicylic acid, acute Rheumatism treated by, and terminating fatally (J. F. Goodhart) 123
Salivary Fistula, Traumatic, treated by passing a fine catgut bougie from the mouth through Stenson's duct; recovery (H. Morris) 144
Sangster (Alfred), case of exfoliation and suppuration of the Nails of uncertain origin 149
——— case of Molluscum fibrosum, with remarks on its histology 166
Sarcoma, case of Intrathoracic (F. de Havilland Hall) . . 200
Sayre's jacket, treatment of a case of Paraplegia from Pott's disease by (T. Buzzard) 157
Scalp, case of Traumatic Aneurism of (W. J. Tyson) . . 64

PAGE

Sclerotic, wound of, close to cornea, enucleation succeeded by serous iritis, &c. (E. Nettleship) 210
Sebaceous disease of the Head and Neck, congenital (H. R. Crocker) 40
Sinus, lateral, see *Thrombosis* of.
Small-pox scars, case of unusual development of Keloid in (J. F. Goodhart) 51
Smith (Thomas), case of spontaneous Gangrene of the thumb and finger of the right hand 196
——— two cases of congenital cystic Hygroma . . . 197
Soda, see *Salicylate* of.
Southey (Reginald), two cases of acute Rheumatism: I. Cerebral Rheumatism without hyperpyrexia; II. Acute Rheumatism; sudden death without elevation of temperature . . . 25
——— case of acute Rheumatism with ulcerative endocarditis, multiple embolisms; death on tenth day 227
Sphenoid bone, left eyeball, &c., removal of (A. T. Norton) . 48
Squire (Balmanno), a calotte after use in the treatment of Ringworm 63
Stenson's duct, passing a bougie through, from the mouth, in cure of a Salivary Fistula (H. Morris) 144
Stokes (William), case of Amputation through the Hip-joint, with remarks 233
Streatfeild (J. F.), case of unilateral Morphœa, with exostoses and corneal opacity 362
——— ——— remarks by Jon. Hutchinson 363
Subastragaloid Dislocation, case of (T. P. Pick) 132
Subcutaneous section, see *Osteotomy* (subcutaneous).
Suppuration of Nails, see *Nails*.
Syphilis, *Report* on Keloid peculiar to 54

Taylor (Frederick), an unusual case of Cardio-pulmonary Bruit 365
——— and H. G. Howse, case of Empyema in which portions of ribs were excised 19
Temporal Bone, fracture through, in a child aged thirteen months (F. S. Eve) 191
Thigh Stump, secondary Hæmorrhage from, with calcareous degeneration of the vessels (W. H. Cripps) 237
Thin (George), *Report* of the microscopical examination of G. Lawson's case of Cancer of the Breast 39
Thrombosis of the lateral sinus and jugular vein, followed by Herpes of the face, in disease of the mastoid bone (H. Morris) 352

PAGE

Typhoid Fever, case of, with Nephritis and profuse hæmaturia, without dropsy (E. H. Greenhow) 177
Tyson (W. J.), case of traumatic Aneurism of the scalp . . 64

Union, sutural, of nerve, see *Nerve* (Median).
Urine, Chylous, case of, after Ague in India, cessation, development of glycosuria and polyuria (S. O. Habershon) . . 142
Uterus, displacement of, causing acute hysterical Vomiting, of ten months' duration (Graily Hewitt) 346

Vein, jugular, see *Thrombosis* of.
Vomiting, acute hysterical, of ten months' duration, caused by displacement of the uterus (Graily Hewitt) 346

Watson (W. Spencer), case of acute Ophthalmitis affecting both eyes; treatment by rapid mercurialisation and the instillation of Duboisin 43
Whipham (T. T.), Cancer of the Pylorus, ulceration, and abscess between the pylorus and liver, gangrene of left foot and leg 369
Wilks (George), case of James Orman, struck by Lightning, June 8, 1878 32
Wound, perforating, of the Lung (Surgeon-Major Alcock) . . 47
——— Gunshot, case of (E. Adam) 137

LONDON: PRINTED BY
SPOTTISWOODE AND CO., NEW-STREET SQUARE
AND PARLIAMENT STREET

Biological
& Medical
Serials

R
35
C54
v.13

Clinical Society of London
Transactions

Biological
& Medical
Serials

PLEASE DO NOT REMOVE
CARDS OR SLIPS FROM THIS POCKET

UNIVERSITY OF TORONTO LIBRARY

STORAGE

BOUND BY
SPOTTISWOODE & Co
LONDON.